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Welcome to Your New Home

More than 3,000 component parts went into your home. Thousands of people had a hand in producing them. Now the components have been assembled into a fine and beautiful house for your enjoyment and comfort.

The manufacturers and trade contractors who made or installed the various parts and equipment in your house will be responsible for handling most of the service problems that arise during your warranty period.

Other problems will be your responsibility. This booklet will help you understand what you must do to maintain your new home in proper working order and to keep problems to a minimum.

Getting to Know Your New Home

This booklet has three purposes:

- To give a general introduction to the most familiar components of today's new homes.
- To provide you with basic information needed to care for and maintain your home.
- To prepare you for the minor adjustments and repairs necessary in most new homes.

Some of the items listed are essential to every home and some are not. For instance, you may or may not have a fireplace, but you certainly will have a heating system and a water supply shut-off valve. Should you home ever require major repairs, call a specialist in the type of repairs needed. In most cases, major repairs should be left to qualified professionals.

Air-Conditioning Systems

If your home has a central air-conditioning system, the following information can help you get the maximum benefit from it. (See also "Thermostats" under "Heating Systems.")

Registers

The registers throughout your house help to regulate the flow of air and to maintain the desired temperature. By opening and closing the registers and dampers, 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 to rooms not in use is a good way to reduce cooling costs. If you have a combined air-conditioning and warm-air heating system, the same registers and



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dampers will be used to regulate the flow of the heat to the rooms. In addition to the air outlets, your house will have an air return register. Many houses have more than one.

Neither these nor the other registers should ever be obstructed by any type of object.

Filters

Most central air-conditioning systems have a filter to help keep the air in your home clean. The Instruction Manual for your cooling system will tell you the location of the filter and how to clean or replace it. Filters should be changed at least monthly during seasons of heavy use. (See also "Heating Systems.")

Insulation

Your home has been insulated so that you can regulate the inside temperature in a cost-effective manner. Open doors, windows, fireplace flues and clogged filters can negate the effects 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.)

Appliances

Your new electric or gas appliances are accompanied by instruction booklets and other papers. Read all instruction literature carefully and remove, fill out, and mail any cards necessary to record warranties. Keep a list of the authorized service agencies with each instruction booklet. If an electric appliance fails to operate, be sure it is plugged in before you call a repair service. If the appliance is separately wired, be sure the circuit breaker is on. (See "Circuit Breakers.") If a gas appliance fails to work, check to see if the pilot light is lit. If you suspect a gas leak, turn off the main gas valve near the meter and call the gas company immediately. Warning: Do not light matches or light cigarettes in the vicinity of the suspected leak.

Attics

Attics, or spaces immediately below roofs, vary in size from crawl space to areas as large as small rooms. Ceiling joists in the attic are not designed to be used for storage or rooms.



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Insulation

Your home has been constructed to be energy efficient. Occasionally, the insulation on the attic floor may be out of place and leave gaps or blocks in the attic vents. If either of these situations occurs, return the insulation to its proper location.

The attic access cover may have insulation on the top side. It should remain securely in place so that no heat is lost through the access hole. Be certain that insulation in the attic is not compressed, because compressed insulation is less effective.

Louvers

Your attic may have louvered openings to allow warm, moist air to escape. Louvered openings should remain unobstructed at all times. If they are closed, harmful quantities of moisture may accumulate.

Bathtubs, Sinks and Showers

Bathtubs, sinks and showers are made of a variety of materials. Bathtubs are most frequently made of vitreous china, of porcelain enamel on cast iron or steel, or of fiberglass-reinforced plastic. Bathroom sinks are usually made of vitreous china, of porcelain enamel on cast iron or reinforced plastic or of marble resin. Showers are most frequently made of ceramic tile, fiberglass-reinforced plastic or molded plastic. Kitchen sinks are generally made of porcelain enamel or stainless steel. Laundry sinks are usually made of stainless steel. To prolong the life of bathtubs and sinks, follow these precautions:

- Do not let food wastes stand in the sink. Use your garbage disposal to dispose of food waste as it accumulates.
- Do not use bathtubs or sinks to hold paint cans, trash or tools when you are redecorating; cover bathroom fixtures when 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.
- Do not use bathtubs or sinks as receptacles for photographic or developing solutions. Developer stains are extremely difficult to remove. (See also "Drains," "Faucets," and "Plumbing.")

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.



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Vitreous China and Porcelain Enamel

The surfaces of these fixtures 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 cleansers. Most household cleaners are mildly abrasive but are safe if used with plenty of water. A nonabrasive cleaner is safer. If you prefer a dry material, baking soda is nonabrasive.

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 tartar, 6 percent hydrogen peroxide, and a household cleaner. Leave paste on stain for 10 to 15 minutes before rinsing.

Cutting food on sink drain boards leaves scratches and nicks. The finish is then susceptible to stains, which become increasingly difficult to remove. (See "Countertops.")

Mildew

Although today's homes are carefully climate controlled, mildew can appear in bathrooms and other areas that collect water vapor--especially in humid regions of the country. An exhaust fan should always be used during baths and showers to help remove water vapor. Wiping condensation from tiles after bathing or showering is a good idea. Damp towels and washcloths should be spread out rather than folded. To eliminate mildew, clean with a mildew remover (available in nonaerosol spray), rinse and dry; then use a disinfectant to retard mildew growth and eliminate odors.

Paint

Water-based paint will come off with a cloth dampened in liquid household cleaner. Small paint spots may be removed by scraping with a razor blade, but you run the risk of gouging the surface. To prevent this damage, be sure the blade is slanted against the fixture. The residue can be removed with a heavy-duty liquid household cleaner. Rinse thoroughly after using any of these.

Rust Stains

Rust stains are caused mostly by wet metal utensils left on the surface of the sink. Steel wool soap pads will also rust and stain when wet and should be kept in an appropriate container.



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Stainless Steel

Stainless steel fixtures generally resist staining and require a thorough scrubbing only occasionally. Use a nonabrasive cleanser or a commercial stainless steel cleanser.

Plastic and Other Substances

Plastic and other substances usually will respond to a nonabrasive cleaner, but the best approach is to check with your plumbing contractor to see what is recommended for the particular material in question. Special commercial cleansers 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. For these use a commercial glass cleaner. Warning: Use ample ventilation; avoid breathing the vapor from the spray and wear rubber gloves. Using a squeegee after each shower will keep the glass looking its best between cleanings.

Caulking

When the caulking around your bathtub or sink dries out or cracks, remove the old caulking and replace it. If you do not have a caulking gun, caulking material can be bought in applicator tubes or in disposable caulking guns. Fill the tub before caulking it. (See also "Drains".)

Cabinets

Kitchen and bathroom cabinets (or vanities) should never be cleaned with harsh abrasives. Wood cabinets may be cleaned as any other wood furniture unless they are plastic coated. Keep cabinet doors and drawers closed when not in use.

Circuit Breakers

Circuit breakers protect the electrical wiring and equipment in your home from overloading. They are the safety valves of your home's electrical system. Every house should have a master circuit breaker. It generally is located at or near the location of the main power meter on the outside of the home. When the master circuit breaker is tripped, the electricity to the entire house is cut off. Individual circuit breakers are located at the electrical panel in the basement. These control individual electrical circuits. Circuit breakers may be reset by first switching the breaker to full off and then back to full on.



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Electrical Service Entrances

The electrical service entrance provides power to the service panel. It has been designed for the electrical needs of the house. Do not tamper with this cable.

Power Failures

In case of a complete power failure, first determine if your neighbors have power. If not, notify the power company. If the power failure affects only your house, check the master switch and circuit breakers. If one circuit breaker continues to trip, check to see if you have overloaded the circuit. If not, call an electrician. Failure to fix a short circuit could result in a fire.

Countertops

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. Never cut anything directly on the countertop because the knife may dent or nick the surface. Countertops made of plastic-coated wood or metal may be cleaned with a detergent solution.

If any of your countertop or work surface is unfinished wood, it will require special care. To protect it from spills, coat it lightly with olive oil (including the edges), let the oil soak in for a few minutes, and then rub it dry with soft lint less cloth. Several thin coats will provide better protection than one heavy coat. To remove onion, garlic, or other odors, rub the surface with a slice of citrus fruit (lemon, orange, etc.), sprinkle lightly with salt, and wipe it immediately with a soft cloth or paper towel. Clean with a mild chlorine bleach solution once a week and after cutting raw meat on it. Rinse thoroughly and wipe dry. If you do not have a built-in chopping block, buy a portable cutting board to protect your countertops and drain boards.

Countertops will often pull away from the wall and require additional caulking. This is normal and can often be repaired using latex caulk.

Decks

Decks have become a highly desirable feature for outdoor enjoyment. The wood used in decks is usually redwood, but decks generally require some maintenance to protect them from moisture. Redwood decks should have a coat of water repellent and preservative applied annually. Over time a floor board may warp, causing nails to pop up. Replace the floor board if needed.



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Disposals

If you have a garbage disposal, it will probably be one of two types: continuous feed or batch feed with locking cover. The instruction booklet will give precise directions for disposal operation. Always use cold water when the disposal is on and especially when grinding greasy substances. Many people erroneously conclude that because their waste disposal is capable of grinding up most of the garbage, it is also capable of eliminating grease and other substances they would not otherwise pour down a drain. In fact, you should be equally careful not to clog disposal drains with grease. Should the drain become clogged, do not put chemicals down the disposal. (See also "Drains.")

Avoid putting large amounts of fibrous materials (such as banana peels or corn husks) down your disposal. Also avoid grinding bones or other hard materials.

Reset Buttons

Most disposals have a reset button that works in much the same way as a circuit breaker. Should the disposal become overloaded with a substance it cannot grind, it will turn itself off. If this happens, turn the switch off, remove the substance obstructing the disposal's operation, wait about 3 minutes, and push the reset button. (See your instruction booklet for its location.) Turn the switch on; if it still does not start, turn it off again and check to see if you have tripped the circuit breaker. If the circuit breaker has not interrupted the flow of the current, turn off the circuit breaker and use a mop or broom handle to turn the rotating plate in the disposal unit until it turns freely. Restore current, push the reset button again and turn the disposal switch on. Warning: Be absolutely sure the circuit breaker is off before inserting tongs to remove material when the disposal is stalled. Also be sure it is off before using a wrench or a broomstick.

Doors

Sticking

Sticking is the most common problem with doors. If the sticking is caused by swelling in damp weather, fold sandpaper around a wooden block and sand the edge that binds. If the hinge screws are loose, tighten them and if the door is still out of alignment, sand or plane the edge that binds. Always paint or varnish areas that have been sanded or planed. Paint and varnish protect wood from moisture and help to prevent further door problems.



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Warping

Warping is another result of too much moisture. If a door warps, the best remedy is to dry it in the sun. If the door is still warped after being thoroughly dried, apply weights to the bulged side and leave it for 2 or 3 days.

Storm Doors

A storm door may reduce your heating costs. Storm doors are usually made of aluminum, wood, vinyl-clad wood or solid vinyl. Houses with insulated steel exterior doors do not need separate storm doors. In mild climates, storm doors are unnecessary.

Weather-stripping

To maintain your home's energy efficiency, exterior doors come equipped with weather-stripping made from a variety of materials, including metal, plastic and rubber. This weather-stripping must remain properly in place to prevent the loss of expensively conditioned air or infiltration of outside air. Metal weather-stripping may need to be re-nailed if it becomes loose, bent out away from the edge of the door or does not seal tightly when the door is closed. This repair is a simple process that requires only a hammer or pliers.

For rubber or plastic weather-stripping, re-gluing or re-nailing should be all that is necessary. For re-gluing, use a strong, water-resistant household glue. Do not use a cyanoacrylic (super) glue.

Painting

Wood exterior doors should be painted when the house or trim is painted usually every 4 to 6 years. Varnished doors may need to be re-coated more often.

Aluminum, vinyl-clad wood, and solid vinyl doors do not need to be painted. Painted doors may be cleaned with a mild detergent; polyurethane varnish would require a damp cloth. (For care and cleaning of the glass in the doors, see "Windows.")

Garage Doors

The moving parts of garage doors should be oiled every 3 months. The screws that fasten the hardware to a wood door should be tightened every 12 months because the wood shrinks a little as it ages, and the screws may loosen. If a hinged, wooden door sags, tightening the appropriate turnbuckle should bring it back into shape. Each garage door usually has two of these, one on each of two cables crisscrossing the back of the door. An overhead door may warp inward from being left up for long periods. Usually this warp can be corrected by adjusting the nuts on the metal rods or the straps across the top and bottom of the door. Sliding garage doors that drag can be realigned by tightening the bolts on the wheels that run on the overhead track. Also, check that the floor guide is not out of line.



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Locks

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

- Locks should be located so that they cannot be reached by breaking a small windowpane in the door.
- Locks that require a key on the inside are potentially dangerous if an emergency occurs. When this type of lock is used. Be sure a spare key is always handy to prevent anyone from being trapped inside the house.
- 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. (See also "Security Systems.")

Drains

Each plumbing fixture in your house has a drain trap. This shaped piece of pipe is designed to provide a water barrier that prevents the airborne bacteria and odor of sewer gas from entering the house. Any fixture that is used infrequently (such as a basement shower) should be turned on at regular intervals to replace evaporated water and ensure that the barrier remains intact. Because of the shape, traps are also the source of most clogging problems.



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Bathtubs, Sinks and Showers

When the drain pipe from a tub, sink or shower becomes clogged, use a plunger first. The rubber cup of the plunger should cover the drain opening, and the water should come well up over the edge. Working the plunger up and down rhythmically up to 20 times in succession will build up pressure in the pipe and do more good than sporadic plunges. Plug any overflow outlet with a piece of old cloth. When working on a double sink, be sure to close the other drain.

If the plunger does not work, use a plumber's snake. You can rent or purchase one at a hardware or plumbing store. Turn the handle of the snake in the same direction when removing it as you did when inserting it. This technique will keep anything attached to the snake from coming loose before it is removed.

If the drain can be partly opened with the plunger or snake, boiling water (140° F for plastic pipes) may complete the job. If not, you can open the trap under the fixture. (Access to a tub or shower trap is usually gained through a small panel in an adjoining closet wall or floor.) Put a bucket or pan under the trap to catch the water in it. A piece of wire may help to dislodge the blockage. The snake can also be run at this point.

Although it is sold commercially as drain cleaner, never use caustic soda to open a drain. It will combine with the grease from the soap or food wastes to form an insoluble compound.

Toilets

A clogged toilet should be treated almost the same way as a clogged drain. The trap is built into the toilet and is therefore less accessible. Instead of a snake, use a coil spring-steel auger, which can be bought or rented from a hardware or lumber store. Insert the auger so that the point goes up into the trap. Turning the handle of the auger will break up the blockage or catch it so that it can be removed. An auger is easier to use if one person holds it while another turns the handle.

Prevention

Ordinary washing soda (not baking soda) added to a drain on a regular basis will help to keep it clear of the grease from soap and cooking utensils. Run hot water through the drain, turn off the water, add 3 tablespoons of washing soda, and follow it with just enough hot water to wash it down the drain opening. Let stand for 15 minutes and run more hot water. To avoid clogging drains or toilets, never pour grease into them. (See also "Plumbing," "Toilets," and "Bathtubs, Sinks, and Showers.")

Driveways, Walks and Steps

Various materials are used for driveways, walks and steps. Concrete is most common for



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driveways. Walks and steps are usually concrete, but they may be made of brick or other material.

Concrete

Your builder has anticipated stresses on concrete driveways, walks and steps and has provided contraction and expansion joints to minimize cracking. However, cracking is one of the characteristics of concrete, and a method of entirely eliminating cracks has not been discovered yet. Unanticipated cracking sometimes occurs from unforeseeable conditions, such as severe frost. Ordinarily, the cracks are of no serious consequence.

Cracks

Minor repairs can be made by following these steps:

- Roughen the edges of the crack if they are smooth
- Clean out loose material and dirt.
- Soak the old concrete thoroughly. The crack should be sopping wet, but water should not be standing in it.
- Fill the crack with patching cement slightly higher than the crack to allow for shrinkage. Commercially prepared patching mixtures need only the addition of water, but be sure the mixture you buy is appropriate for concrete.
- Cover the patch and keep it damp for several days. The longer the drying time, the stronger the patch will be.
- When the cement has partly set. Remove excess cement with a wire brush. At this stage the surface of the cement appears sandy.

Winter Safety

Protect your driveways, walks and steps by removing snow and ice promptly. If a thin layer of ice cannot be removed, use sand for traction. It is safe for driveways, walks, steps and nearby grass or shrubs. Do not apply salt in any form. Repeated thawing and freezing with salt and chemicals can damage concrete, brick, mortar and asphalt, and salt will kill grass shrubs and trees. Provide an outdoor floor mat to prevent the sand from being tracked into the house. Another mat just inside the door will provide additional protection for carpets and floors.



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Electrical Receptacles

The wiring in your new home meets the code requirements and safety standards for the normal use of electrical appliances. Ordinarily, small appliances that require personal attendance for their operation may be plugged into any electrical receptacle without fear of overloading a circuit. However, the use of a large appliance or of many small appliances on the same circuit may cause an overload. If a circuit breaker trips frequently, contact a licensed electrical contractor to learn whether additional wiring is needed. (See "Circuit Breakers.")

GFCI

These special circuits are used in kitchens, bathrooms, garages, outdoors and mechanical rooms. They provide added protection. If an outlet on a GFCI circuit does not work, you must locate the outlet, which has the RESET button and press to reset the circuit.

Faucets

The faucets in your home will sometimes require repair. The less strain you put on faucets, the less frequently they will need repair.

Aerators

Cleaning the aerators will be your most frequent task in maintaining faucets. An aerator adds air to the water as it leaves the faucet and eliminates splashing. It also reduces water usage, thereby saving you money. Aerators are used on kitchen faucets and bathroom sinks. To clean an aerator, unscrew it from the mouth of the faucet, remove any deposits, remove and rinse the washers and screens, replace them in their original order, and put the aerator back on the faucet. The frequency of the need for cleaning will depend on the condition of the water, but generally every 3 or 4 months is adequate.

Leaks

All leaks raise your water bill, and a leaking outside faucet can cause a damp basement. Inside or outside leaking faucets generally can be fixed by replacing the washers. Some faucets with single controls for hot and cold water have no washer, but their cartridges, which last longer than washer, must still be changed periodically. Before attempting to repair a faucet, turn off the water at the nearest intake valve. Washers may be obtained at most hardware stores. For cartridges, you may have to go to a plumbing store.



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Outside Faucets

If the temperature falls below freezing in the winter and frost proof fittings are not provided, outside water connections for summer gardening should be turned off and inside and outside pipes drained before cold weather begins. This precaution will prevent the freezing and bursting of the outside pipes and fittings. The control valve is usually inside the house close to where the water supply goes through the exterior wall. Open the outside faucet to drain off any excess water. Always remove the garden hose and store it for the duration of the cold weather.

Fireplaces

Before using your fireplace, equip it with andirons (or a grate) and a well-fitting screen, and check to see if it draws properly. To do this, open the damper, light a newspaper on the andirons or grate and see if the smoke is carried up the chimney. Before lighting any fire, the damper should be opened. Keep the damper closed when the fireplace is not in use so that warm air will not escape in the winter and cool air will not escape in the summer. Build any fire on the andirons or grate '7 not directly on the fireplace floor. Do not burn trash or rubbish in the fireplace. Never use Kerosene, gasoline, or other highly flammable liquids to start a fire and always be sure the fire is out each night before you retire. Store firewood outside away from the house because it may harbor insects, and because wood stored outside will burn longer.

Cleaning

Occasionally throwing a handful of salt on the fire will help prevent the accumulation of soot, and it will also add color to the flames. However, salt should never be used in fireplaces made of metal. The chimney should be checked periodically to see if cleaning is necessary. A chimney professional can tell you if your chimney needs cleaning.

Floors

Floors are usually made of either concrete or wood, and covered by a wide variety of materials.

Concrete Floors

Concrete floors are generally maintenance free, but they are susceptible to cracking. (For repair of such cracks see "Driveways, Walks and Steps" and "Foundations.") Occasionally basement floors will collect water from condensation of moisture in the air on cold basement walls. (For treatment of this condition, see "Foundations.")



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A concrete sealer will make an unpainted concrete floor easier to keep 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.

Hardwood Floors (including laminate & engineered wood products)

The structural lumber in your house has been selected in sizes and grades to provide a safety factor well beyond what is required to carry the load. Some shrinkage may occur in these framing members, but your home has been designed so that any settling will be as even as possible.

As with other building materials, wood may contract or expand with weather changes. It is not affected by the cold, but it may shrink with increased dryness or swell with increased humidity, gaps may appear and disappear.

The hardwood floors in your new home have been precision manufactured, and expertly installed and finished by skilled craftspeople. Normal maintenance should include regular vacuuming or dry mopping to remove surface dust and dirt. Do not use water on hardwood floors. Water sometimes causes the grain to rise and prolonged use may cause cracks from the expansion and shrinkage of the wood.

Regular dust mopping or vacuuming is an essential part of hardwood floor care. A good quality dust mop or vacuum with bristle head is the most effective tool for cleaning dust and dirt off the floor.

Spills and tracked in dirt can build up and will require more than just dust mopping or vacuuming to remove. When this happens use, a damp cloth with a mild cleaner solution diluted with lukewarm water.

DO NOT USE THE FOLLOWING PRODUCTS ON YOUR FLOOR: Murphy's oil soap, or any other oil soap, Paste Wax, Pledge or other wax — or silicon — based polishes, Fantastik, Formula 409 or other solvent containing cleaners, Pine based cleaners like Pine Sol, Ammonia, or any type of steam cleaner.

DO NOT WAX!!! Urethane finishes require little maintenance, so it is not necessary to wax or polish the floor. Waxes or polishes will actually make the floor harder to clean and cause problems for adhesion of future recoats



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Protect the finish on the floors by attaching furniture rests to the bottom of furniture legs. They also help to distribute the weight better.

Resilient Floors

Resilient floors include vinyl, linoleum, asphalt and rubber. For daily care, remove loose dirt with broom, dust mop or vacuum. Wipe up spills 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. Remove the cleaning solution, rinse the floor, and let it dry. Some resilient floors are designed to never need waxing, but some of them require a coat of floor polish. Your flooring contractor can tell you what kind of flooring you have.

The best polish for most resilient floors is water emulsion wax. Apply either the wax or a floor finish to a clean dry floor. The finishes provide hard films that do not smear but also do not respond to buffing. Waxy polishes leave softer films with slightly lower gloss that can be buffed to restore a shiny appearance. Apply the polish sparingly—use the least amount that can be applied without streaking. Let it dry about 30 minutes before allowing anyone to walk on it. Some porous floors may require two coats, with a buffing after each. About once or twice a year, take off built-up old polish or wax with remover. Dilute it as recommended, apply, rinse, let it dry and apply a new coat of polish.

Tile Floors

Ceramic tile normally needs only a wipe with a damp cloth or an occasional wet mopping to stay clean and new looking. If necessary, a more thorough cleaning with a detergent or ceramic tile cleaner will remove grime.

To remove particularly heavy accumulations of film from glazed tile, you may need a stiff brush and mild scouring powder. Unglazed tile may be scrubbed or scraped. To clean the joints between tiles, use a fiber 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, they may stain the grout.

Foundations

The weight of your house rests upon the foundation. The foundation consists of the footing--a large mass of concrete poured on native soil--and the foundation walls, which rest on the footing. Foundation walls are usually made of poured concrete. If you have a basement, the foundation walls also serve as the basement walls.

Foundation walls are subject to a wide variety of stresses and strains. Because the base of



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the wall is in the ground, it maintains a fairly constant temperature. However, the top portion extends out of the ground and may be subject to extreme seasonal temperature changes. The changes cause concrete masonry to expand and contract.

Cracks

Combinations of stresses and temperature variations may cause cracks in the basement or foundation walls. These cracks do not affect the strength of the structures and may be easily repaired if desired.

To fill medium to large cracks:

- Roughen the edge of the crack if it is smooth. For large cracks, undercut the crack to form a V-shaped groove to a depth about equal to the width of the crack at the surface.
- Clean out all loose particles of cement, mortar or concrete with a wire brush or a thin blade.
- Wet the crack thoroughly.
- Fill the crack with patching cement, allowing a little extra for shrinkage. Be sure the patching mixture is suitable for the job.
- Just before the cement hardens, rub it with burlap or a similar material to give it a texture similar to that of the wall. Wetting a trowel before going over the patch for the last time will produce a smooth surface.
- Paint it to match the rest of the wall if necessary.

To repair small cracks, fill them with a heavy paste made by mixing dry cement-base paint with a little water. Force the paste into the crack with a stiff bristle brush or putty knife. To match the existing wall finish, use a colored paint to form the paste. In lieu of cement-base paint, you may use a mixture of cement and fine sand (one part cement, two parts sand capable of passing through a 100-mesh screen) mixed with sufficient water to form a heavy paste. For the fine or hairline cracks, work cement-base into the crack with a short, stiff bristle brush.

Condensation

Probably the most disturbing problem in a new home is condensation. It may look as if moisture is seeping through basement walls, pipes are leaking, or water is coming through the windows. Condensation takes place wherever warm, moist air inside the house comes in contact with a colder surface, such as a window, basement wall or an exposed pipe. Actually, a perfectly dry basement can have wet walls because moisture in air condenses on cold basement walls during the summer months. Windows should be closed during damp, humid weather and opened during clear, dry weather.



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Condensation is at its maximum in new homes. When your home was new, gallons of water went into the concrete of your basement wall. This water comes out of the walls by evaporation, which consequently raises the moisture content above normal. Proper ventilation will bring this normal drying-out process to its conclusion as steadily as possible. However, do not try to speed up the process by creating extremely high temperatures during the winter. The house will dry out unevenly, which will exaggerate the effects of normal shrinkage.

Condensation also may be reduced by providing outside vents for equipment such as a clothes dryer. Some warm-air furnaces have humidifiers to bring moisture content in the air up to healthy standards during winter months. If excessive humidity develops, turn the humidifier down or off to prevent excess water vapor.

Some houses are equipped with fans in the kitchen, bath or utility areas that exhaust moist air and odors to the outside. If your house has such fans, use them for short periods of time when excessive moisture is being generated. Turn these fans off as soon as possible because they exhaust expensively conditioned air either warm or cool, to the outside.

Leaks

As with all the other parts of your house, basement walls are not waterproof themselves. Where conditions have warranted, the builder has damp-proofed the underground portions of the foundation to prevent the entrance of water from surrounding soil. Repair of basement leaks depends upon local conditions that make each case different. Before making extensive or expensive structural repairs to correct wet-wall conditions, thoroughly check your drainage system. In many instances, repairing or adjusting downspouts or gutters will help to carry surface water away from foundation walls. If the ground outside your basement slopes toward the wall, pack and bank up soil so that water will drain away. Avoid planting shrubbery within less than 3 feet of the foundation. Never water your plants toward the foundation. (See also "Landscaping.")

Heating Systems

Heating systems, methods and installations vary widely. The capacity of the system in your home has been determined by the heating load necessary to keep your home at a comfortable temperature. Oversized systems are inefficient. Learn everything you can about the system installed in your home: how it operates, how it functions at maximum efficiency and what kind of fuel it uses. If you have any questions after studying the instruction manual for your heating system, your heating contractor can probably provide the answers.

Thermostats

The thermostat (usually located on an inside wall) helps to keep your entire house at a



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comfortable temperature. Individual room temperatures may be further regulated by adjusting the registers in the various rooms or the dampers in the ducts from the furnace to the registers. If your home is heated by a warm-air system, your thermostat may also contain controls for converting the heating system to the cooling system. You can significantly reduce your heating bill by lowering the thermostat during the sleeping hours and when your home will be unoccupied for a prolonged period. Homes can be optionally equipped with set-back thermostats that can automatically reduce the setting shortly before bedtime and return it to normal prior to morning or wake-up.

Maintenance

The controls on all types of heating systems occasionally malfunction. Such a problem does not mean that anything is fundamentally wrong with the system. Usually a simple adjustment will solve the problem, but unless you are trained to make such adjustments, you should rely on the skills of a professional. Also call on a professional for an annual inspection and cleaning of your heating system. The best time to do this work is late summer or early autumn.

Filters

Some types of warm-air furnaces have filters, usually found near where the cold air returns from other rooms. These filters remove dirt and dust from the air. For efficient heating, they should be replaced at least every 3 months during each heating season. In some areas more frequent changing may be desirable. If you cannot see through the filter held up to a light, it needs to be changed. Usually, replacement consists of removing one or two metal screws, [pulling out the dirty filter, and inserting a new one obtained from a hardware or department store. With some furnaces you need only open a latch to get to the filter. Some heating systems require two filters stacked vertically; for this type, both filters should be changed at the same time. Read the instruction booklet for your heating system for specific directions. You may need to change the filters more frequently at first.

Humidifiers

If your furnace has a humidifying attachment, it will be one of two types: power or evaporative. Both types will need occasional cleaning to remove accumulated mineral deposits that can interfere with proper functioning.



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Oiling

Forced warm-air heating systems contain an electric motor and fan within the furnace enclosure. Some of these systems require oiling at the beginning of and during the heating season. Front or side panels generally can be removed so that you can reach the fan and the electric motor as well as the oil cups. (See the instruction booklet for specific direction.)

Pilot Lights

Keep the pilot light of a gas-fired furnace burning during the summer; the extremely small amount of heat it generates will keep the furnace dry and prevent corrosion. The furnace will be ready for the first cold snap of the autumn. However you need not keep it lighted if you have a combined heating and cooling system. Some models now have pilot-less ignitions, which save energy and require less attention.

Reducing Utility Bills

Your household's lifestyle is the largest single variable that affects your utility bills. Identical homes on the same street may have utility bills that vary by 100 percent. By living "smarter" in your new home, you can maximize the benefits from insulation and other energy saving features your builder has installed. Common sense activities-such as those that follow can produce substantial savings:

- Closing the windows and doors when the heating/cooling system is working.
- Not running the dryer, stove or oven on a hot summer day.
- Adjusting thermostat settings to 68° F (or lower) in the winter and to 75° F (or higher) in the summer.
- Closing the drapes or curtains on hot days when the sun shines into your home.

Think about the way you live in your home and look for ways to improve the efficiency of all the systems. Remember that in the summer, part of the heat removed from the home by the air-conditioning system is generated inside by lights, appliances, and people. Also during the heating season, the sun can warm the inside of the house even on cold days and take part of the load off the furnace if you open drapes on the sunny side of the house. During winter vacations, do not shut off the heat or you may come home and find a frozen or burst pipe.

Landscaping

Proper care of the grounds around your house can not only add to its beauty but also protect the structure of the house. As you design your landscaping plan, remember to allow for proper drainage. This includes runoff from rain gutters, directing water away from the house, concrete, and heavily walked areas, and limiting the amount of watering near the home.

Grading

Drainage swales or other discharge channels were sized and sloped to accommodate the



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water runoff and should be kept clear of debris such as leaves, gravel and trash. Allow 6 inches of clearance between your grading and the wall siding; otherwise, water may enter the joint between the foundation and the wall material, or the wood may decay. As the earth around the house becomes compacted, depressions may form. These places must be filled with dirt so that water will not form puddles.

Rain gutters

Connect a non-perforated 3" drain pipe to the end of each rain gutter. The drain pipe attaches directly to the vertical portion of the rain gutter, (e.g., remove the angled piece of rain gutter at the bottom and attach the drain pipe adapter in its place). Run it away from the house at least 15 feet. At the end, connect a drain that allows the water to return to ground level via an elbow fitting with a "pop-up" feature (available where you purchase the drain pipe). The point of discharge is best if located in an area with thick ground cover such as lawn to help absorb the large amounts of water. When necessary, run the drain pipe under a sidewalk to avoid discharging water into courtyard or planters bordered by house and concrete walks. This is the single most important thing you can do to minimize potential water problems in the basement and undermining of site concrete.

Always keep gutters and downspouts unobstructed by leaves, tree limbs, or anything that could cause overflowing. Vinyl gutters never need to be painted. Aluminum gutters need not be painted, but can be if you choose. The gutters have been installed to direct water off the roof and avoid water damage to the wall systems. It is the homeowner's responsibility to direct water away from the foundation, house and concrete. Unmanaged water on the ground can cause excessive settling, erosion, undermining of concrete slabs, puddling in the window wells, flooding at basements and other damage. You should install appropriate drainage systems as part of your landscaping design. Particular attention should be given to downspouts handling a large volume of water (i.e. large surface of roof drains through it) and downspouts near window wells and concrete. Be sure that downspouts direct water away from the foundation.

Settling

Settling of the ground around the home will occur during the first year or two after closing. Here are a few ideas to help you manage this situation.

- When doing your landscape grading, pile extra dirt and topsoil along the house where the settling will occur.
- After the installation of your sprinkling system, water for 4 or 5 days before laying sod or seed. This will help settling around the house, as well as trenches dug for sprinkler pipe.
- Design your system in zones, which separate the watering areas near the house from the large areas of your lawn.
- Minimize or eliminate completely, landscaper materials that require heavy amounts of water along the house. Use drought-resistant plants instead and water



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less.

- As ground does settle, wheelbarrow dirt to low areas regularly--especially during the first spring following move-in. Neglecting low areas will create areas for water to pool and drain toward the house, instead of away. Maintaining the slope away from the house is critical.

Lawn and Plants

Water your new lawn and shrubs often. In the fall of the first year rake the lawn thoroughly, reseed it and add organic fertilizer or manure. Give special attention to bare spots. When watering the lawn, avoid sprinkling painted parts of the house, which can reduce the life expectancy of the paint. If you plant flower beds near the house, do not disturb the earth next to the foundation. Always dig the beds-several feet away.

The Landscaping Plan

Plan your landscaping according to how you want your grounds to look in 10 years. Long range planning takes more time, but it pays off.

Before you dig a single hole, you need reliable, specific information about the local flora and its requirements: Then you can decide what to plant, where to plant it and how much of a budget you need.

As you learn about plants, remember that the landscaping around your house is an extension of the indoor living space. The grounds should include defined areas for work and play, often best screened or partitioned by trees, shrubs, or other greenery.

You will probably want plants of various sizes and shapes that attract the eye both near and far. You will need taller shrubs for privacy, trees for shade, flowering trees for color, low-growing plants under windows, and thicker evergreens for background.

The beauty of having a landscape plan is that you need not feel compelled to carry out the plan all at once. You can work it out a little at a time, as gradually or as rapidly as time and money allow, yet still know where you are going at every step.

Once you have a general plan in mind, list all the plants that appeal to you, and then see what your garden encyclopedia and other references say about them.



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When you start the actual design, make a sketch of your property to scale. Carefully plot the exact location of the house, walks, walls, trees and any other landscape features. Indicate doors and window too because they will influence the location of plants.

Sketch in the areas you want to reserve for turf, and precisely locate each shrub and tree that you have chosen to plant. Try to figure their space requirements at maturity, particularly if you expect to plant young stock. And take care not to plant anything that will grow up to block a good view or shut out light needed at a window.

If all this sounds like a lot of work, remember that a thoughtful plan minimizes wasted effort in the long run. You should make a long-range plan, stick with it, and make changes only if they improve the overall scheme. The period when everything seems barely a foot high passes soon enough. Before you know it, your landscaping will be the envy of the neighborhood. It could increase the value of the property.

Plumbing

The plumbing in your house was installed by a professional, and generally should need only minimum maintenance if you care for it properly. If any problem arises, attend to it promptly to prevent a bigger and often more costly problem.

Intake Valves

All members of your household should become familiar with the various water intake valves of your plumbing system. You will rarely need to use them, but in the event of an emergency or if you need to make minor repairs, they will be easy to locate. Intake valves for toilets are usually under the water chamber. Those for sinks are usually under the sink, while the main intake valve is usually near the point at which the water enters the house.

Leaks

Copper pipes should last the lifetime of a house, but if a joint should loosen, it will need to be resoldered--a job requiring an acetylene torch and best left to a plumber. Plastic pipe should also last the lifetime of the house, and a loose joint should likewise be repaired by a plumber.

If your washing machine, dishwasher or other water-using appliance appears to leak, first check to see that the trap through which it drains is completely open. Sometimes a partially clogged drain can cause an overflow within the appliance. (See also "Drains")



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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. Ordinary antifreeze will provide protection for toilets and drain pipes, but it cannot be used in the distribution pipes. In cold climates, be sure all entrances to crawl spaces are closed during cold weather.

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. You should first restore heat to the affected part of the house. A frozen pipe is most likely to be on an outside wall exposed to winter winds. Open all faucets connected to the lines so that steam can escape if any forms during thawing. Begin the thaw at the frozen point nearest the faucet. A thermometer held against an exposed pipe helps to locate this point.

A heat lamp set at least 6 inches from 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. As the pipe thaws, move the source of heat toward the frozen area until the job is complete. 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, but be sure the appliances do not touch the pipe. If a large amount of pipe is involved or if an underground pipe is frozen, call a plumber. Plumbers have equipment for thawing pipes electrically.

Ranges, Ovens, and Broilers

Many ovens and broilers, both built-in and floor models, have self-cleaning cycles or clean themselves as they are used. Others must be cleaned in the conventional manner. The outside of your stove, oven or broiler can be cleaned with a nonabrasive cleaner such as baking soda sprinkled on a damp cloth or sponge. Or the manufacturer may make a special appliance cleaner that both cleans and protects against stains. If your burner panel or oven front is stainless steel, you may want to use a stainless steel cleaner on it. Never use harsh, abrasive cleaners on the outsides of stoves, ovens, or broilers.



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Do not let the oven go too long between cleanings. A lightly soiled oven can be cleaned with a solution of 1/4 cup baking soda to 1 quart of water. Rubbing with a paste of baking soda and water may be necessary for some spots. A heavily soiled oven may require a commercial oven cleaner. Choose one that is non-corrosive and nontoxic and follow directions and cautions closely.

Electric

An electric stove will usually have a separate circuit. If your range fails to work, check the proper circuitry. (See "Circuit Breakers.")

Gas

If the burners of your stove, oven or broiler fail to light, check to see that the pilot light is lit. If it is, the burners may be clogged and should be cleaned. If they are removable, the burners can be soaked clean in a solution of washing soda, but do not soak them in an aluminum pan. A wire brush or thin stiff wire may be helpful in removing burned food particles from the holes in the gas burner. When using wire, be careful not to push the material farther into the holes. If you suspect that gas is leaking, turn off the main valve (near the meter) and call the gas company immediately. Warning: Do not light matches or smoke.

Hoods

The filters in range hoods need to be cleaned or changed periodically. For location and directions, consult your instruction manual. Fan motors should be oiled periodically.

Microwave Ovens

Follow owner's instruction booklet for safety and use. Because some containers and utensils can permanently damage microwave ovens, make sure that the ones you use in your oven are safe for microwaving.

You can remove some spatters and drips from the ovens interior with a damp cloth. Greasy spatters require a sudsy cloth and rinse. A cloth dampened in a solution of baking soda is also safe, but never use a commercial oven cleaner on any part of your microwave oven. Do not use abrasives such as cleaning powders or steel or plastic pads on any part of your microwave oven. They will mar the surface. For exterior maintenance, wipe the case and control panel with a damp cloth and dry thoroughly. Do not use cleaning sprays, large amounts of soap and water, abrasives or sharp objects on the panel.



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Roofs

Your roof will give you many years of good service if it is properly maintained. Flashing seals those places where the roof abuts the walls, chimneys, dormers or valleys where two roof slopes meet. If a leak should occur, call a qualified roofer to make the repair. A qualified roofer should inspect the roof at least every 3 years. If you have to walk on the roof for any reason, be careful not to damage the surface or the flashing. Be particularly careful when installing a TV or radio antenna--a careless job can cause serious leaks.

Freeze-Thaw Cycles

Winter storms followed by relatively mild temperatures cause freeze-thaw cycles that create leaks in roofs. Most roof shingling is not waterproof. Shingles are meant to shed water down their overlapping courses into gutters or off the roof overhang. Erratic weather conditions can cause a build-up of water from snow or ice dams formed either on the roof or in gutters and downspouts. This water backs up under the shingles or eventually seeps through the shingles, causing leaks. Although roofs with a shallow pitch are more susceptible to this phenomenon than are steeply pitched roofs, no conventional home is completely immune to the problem. Remove ice blockades from gutters and downspouts, and attempt to remove built-up ice and snow from the lower portions of the roof. In areas of the country where freeze-thaw cycles are prevalent, some homeowners lay heating cables in their gutters and even part of the way up the roof to counteract the freezing process. (See also "Gutters.")

Security Systems

Although security systems are installed to work autonomously, you should regularly (a) check that the alarm and circuits are in working order and (b) inspect sensors one by one. Consult your instruction manual on how to inspect the sensors. Check any primary and backup batteries once a month, and replace them at least once a year.

Smoke Detectors

Your new home is equipped with smoke detectors. Certain basic procedures will ensure that they function properly in an emergency. Carefully review the Manufacturer's literature to familiarize yourself with each unit. Smoke detectors are connected to your home's electrical system for power, as well as a battery backup system. Because they are wired together, all will sound in case of fire. Most battery-operated detectors will continue to sound until a reset button is pushed. Other types will stop automatically when smoke is cleared from the chamber. Check the manufacturer's literature to see which type you have so that you may act accordingly if the detector is accidentally triggered. Periodically test the detector to see if it is working properly.

Different types of detectors will require different care. Follow the manufacturer's recommendations for periodic maintenance. Such maintenance may include replacing



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light bulbs, replacing the batteries, vacuuming the unit inside and out and cleaning it with a cotton swab and alcohol.

Termites

Termites are easier to bar from a new house than to exterminate from an old one. You should conduct your own inspection in the spring of each year. Look for possible remains of the winged insects. Search the sides of basement or foundation walls and piers for the earthen tubes that termites build to reach the wood above the foundation. Use the blade of a knife to test wood for soundness. If you suspect the presence of termites, consult a professional exterminator.

Toilets

Never flush materials such as hair, grease, lint, diapers, sanitary products, and rubbish down the toilet. Such waste stops up the toilet and sanitary sewer lines. (For unclogging a toilet, see "Drains.")

In order to conserve water, toilets have been redesigned to use no more than 1.5 gallons per flush, (older toilets used 5 gallons). Because of the decreased water volume, it may be necessary to flush several times. Holding the handle down for an extended period may also help.

Cleaning

A variety of commercial cleaners are made especially for toilets. Use them according to the manufacturer's directions, but do not mix them or use them with household bleach or any other cleaning product. And never use them in anything but the toilet.

Leaks

Most toilets have a water chamber, flush valve, overflow pipe, float and ball valve. If the water chamber appears to leak, the water may only be condensation forming on the outside of the tank and dripping to the floor. (See "Condensation" under "Foundations.") If water leaks into the bowl through the overflow pipe, try bending the rod so that the float will be closer to the bottom of the tank. Flush the toilet, and if it still leaks, the inlet valve washer probably needs to be replaced. If the water trickles into the bowl but is not coming through the overflow pipe, it is coming through the flush ball valve. The connections between the ball valve and the flushing handle may need aligning so that the ball will drop straight down after the handle has been pushed. A worn ball valve or dirt or rust on the ball seat will let water leak into the bowl. If the ball valve or ball seat is dirty or rusty, clean it. If the ball is worn, replace it.

Trimnings and Moldings

Trimnings and moldings, such as baseboard, may separate from the floor and leave a



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small space that will catch dust and dirt. This separation is the result of the normal process of settling and shrinking in your home. Loosening the quarter-round or other trim and re-nailing it in its proper position will remedy the problem. If a small separation occurs at corners or at 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 thin piece of cardboard or heavy paper slipped under the molding will protect the floor or rug while you are painting.

Walls and Ceilings

Your house has two types of walls: bearing and nonbearing. Nonbearing walls may be altered without fear of structural damage, but alteration of a bearing wall must be done carefully to avoid reducing its bearing capacity. All exterior walls are bearing walls. All ceilings are essentially the same in structure, but they are made of a variety of materials.

Interior Plaster and Gypsum Wallboard

Regardless of whether the interior walls of your house are plaster or gypsum wallboard, they should last for the life of your house without undue maintenance. In unusual cases, such as extreme shrinking in framing boards, minor cracks may appear in wallboard or plaster walls. No repairs should be attempted until you redecorate the room. At that time, fill the cracks with spackling compound (available from any paint store), smooth it out with fine sandpaper, and then redecorate the entire surface. Except in very unusual conditions, cracks should not reappear. To prevent cracks wider than half an inch from reopening, apply the spackling compound, then cover the crack with a strip of fiberglass mesh made for this purpose, cover the mesh with another thin layer of spackling compound, feather the edges well, and sand smooth.

Sometimes normal shrinking will cause nails to pop from wallboard. The framing boards and the wallboard shrink away from the nail and leave it sticking out beyond the surface of the wallboard. Popped nails do not alter the strength of the wall, and they should be left alone until you redecorate. Then they should be reset, respackled and repainted with the rest of the wall.

Unusual abrasions may scuff or indent the surface of plaster or gypsum walls. If this occurs, fill the indentation with two or three applications of joint compound used for drywall taping.



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Interior Paint and Wallpaper

The interior walls and ceilings of your new home should give you long service if properly cared for. Consult your paint and wallpaper dealer for the correct cleaning compound for painted surfaces and wallpaper. Your dealer can also assist you in choosing from hundreds of possible paint colors and paper patterns when you wish to redecorate or make color changes.

If paint starts to blister or peel, repaint or touch it up immediately to prevent the problem from spreading. If the problem persists, look for the cause, such as moisture penetration through overhead joints or finishes.

Interior Paneling

Interior walls may be paneled in wood, cork, and a myriad of synthetic materials, some of which look like wood. Most of these are stain resistant and easy to clean. Wood paneling may require a special wood cleaner, but some wood for interior walls has been treated or coated so that it is as stain resistant and as easy to clean as the synthetics. Care of these varies with the material but most of them can be cleaned with a cloth dampened in a mild solution of detergent and water, followed by a cold water rinse. Check with the supplier of your paneling to learn what is best for your specific wall surface.

Exterior Brick Walls

Brick walls add a special character to a home. Do not expect each brick to be perfect and spaced perfectly. Small surface chips or cracks and slight variations in size and placement are normal and help create the texture and beauty of brickwork. The mortar joints in brickwork are subject to weathering over the years. When this occurs, the joints should be pointed up (new mortar inserted) to maintain a weather-resistant exterior. This work should be performed by a brick mason.

Glazed tile or brick may be cleaned with a soap-and-water solution. Stubborn discolorations usually may be removed by gently scrubbing with a nonabrasive household cleaner or a special tile cleaner.

Clay masonry may require cleaning by a contractor specializing in this type of work. He or she may use a steam or steam-and-water jet with a suitable cleaning compound.

Efflorescence

A white powdery substance composed of one or more crystallized soluble salts sometimes develops on masonry walls. It usually can be removed by scrubbing with water and a stiff brush. If a stronger solution seems necessary, try using $\frac{1}{2}$ cup vinegar in one gallon of water.



Aluminum, Steel, Vinyl and Other Exterior Synthetic

Siding

Many synthetic sidings are guaranteed from the manufacturer against cracking, chipping, peeling and termites for 10 years or more. Most of them resist marring and scarring and are nearly maintenance free. Dirt and fingerprints around doors and windows are easily removed with a mild detergent solution. For other areas, infrequent hosing may be sufficient.

Water Heaters

All water heaters (weather gas, electric or oil) have a control mechanism to govern water temperature. This should be set at 120° F or lower. Your household's individual preferences should determine the hot water temperature. The lower the temperature setting, the less fuel you will use, which could produce considerable savings on your utility bills. Additional savings will result from putting an insulation jacket on the water heater. On gas heaters be sure the air intake is not obstructed. Avoid storing anything near the heater that obstructs the flow of air or creates a fire hazard.

Water heaters normally collect small quantities of scale and dirty water. To remove this material, first shut the water intake valve and turn off the power source for your water heater (gas, electric, etc.). Failure to turn off the power source could cause the heating element to burn out. Then open the valve at the bottom of the heater and completely drain the tank. Open the water intake valve and allow some water to flow through to flush out the remaining sediment. Shut the valve at the bottom of the tank. When the tank is full, follow manufacturer's instructions for restoring heat. In localities with especially hard water, a water softener will reduce the frequency of cleaning. In most locations, an annual cleaning should be sufficient.

Temperature and Pressure Relief Valve

Every 3 or 4 months you should check the temperature and pressure relief valve on your water heater to be sure the lever works properly. If the thermostat should fail to operate properly, this valve would prevent a dangerous increase in water temperature and pressure.

Noisy Pipes

If you hear noises in the pipes when the hot water is turned on, it may mean that air or steam is in the pipes. The steam may result from the water being too hot. Reducing the temperature of the water may help. (See also "Plumbing" and "Faucets.")



Windows

Your windows may be framed in a variety of materials, including aluminum, wood, solid vinyl, and vinyl-clad wood. Most common are solid vinyl and aluminum. Wood frames should be painted whenever the house or trim on the house is painted (every 4 to 6 years). Aluminum, vinyl, and vinyl-clad wood do not need painting. Steel frames should be painted with a rust-inhibiting paint. Aluminum can be left to age to a uniform gray. The oxidation (or graying) will protect it from the elements. If you prefer to maintain the brighter new look, a coat of wax will work well. To restore aluminum that has turned gray, polish it with steel wool. However, prevention is easier than polishing...

Skylights

Skylights may leak if the seal breaks. When your roof is being inspected for general maintenance, have your seals, caulking and flashings around sky lighting inspected for any cracks or interruptions.

Storm Windows

Your house has double-glazed windows (two layers of glass with a sealed air space in between), and typically does not need storm windows. In extreme climates, storm windows over insulated glass may be cost effective for energy conservation. If storm windows are provided with your house, using them will reduce your heating and cooling bills. When exchanging the glass and screens in the spring or autumn, be sure to clean them both. Many houses in temperate climates do not need storm windows.

Cleaning

If the outside of a window is extremely dirty, use a piece of crumpled newspaper to wash the glass with a solution of equal parts vinegar and water or 3 tablespoons of denatured alcohol per quart of warm water. You may also use a commercial glass cleaner. Lightly soiled windows will usually respond to a solution of 1 cup vinegar to 1 gallon of water. Apply the cleaning solution with a sponge or lint less cloth, and dry the glass with a chamois or a lint less cloth. A rubber squeegee will speed the drying process. The window frames can be cleaned with a mild detergent solution.

Minor Repairs

If a window does not slide easily, rubbing the channel with a piece of paraffin should help. An old candle will do. The same treatment will work for sliding wooden closet doors. For metal doors and windows, use a silicon lubricant.



First Aid Kit

Keep a home first aid kit or first aid material in a convenient location. Buy and keep with it a booklet on first aid and home safety.

Duplicate Keys

Have duplicate keys made and keep them in convenient places so that small children who lock themselves in the bathroom or other rooms can be freed promptly. When you take a vacation, leave a key with a trusted neighbor. If you forget to attend to something before you leave or if an emergency arises, your neighbor might be able to take care of it.

Annual Checklist

Depending on where you live, most of the items on this checklist will apply to your home.

- Check the condition of glazing compound, caulking and exterior paint. Replace or paint as needed (spring).
- Exchange glass and screens in storm doors and windows (autumn and spring). Inspect the roof for snow damage; repair it if necessary (spring).
- Check for evidence of termites (spring).
- Check interior paint and redecorate when necessary.
- Seed and feed the lawn (spring and/or autumn); plant annuals (spring); do appropriate pruning of perennials (some in spring, other in summer and autumn); rake and compost leaves; mulch perennials that need winter protection.
- Remove hose connections and store hose to avoid freezing (autumn).
- Keep driveways, walks and steps free of ice and snow to avoid damage to them and to prevent hazardous walking and driving conditions.
- Have your heating system cleaned and repaired if necessary (when not in use). If your unit has an air filter, replace it at least every 3 months during each heating and cooling season.
- If you have a separate air-conditioning system, clean and change filters as the manufacturer recommends.
- Oil motors of appliances as directed in instruction manuals.
- Check cords and plugs of all electrical appliances for wear. If necessary, have them repaired or replaced.
- Test your smoke detector for proper operation. Be sure to clean the unit (with a vacuum or swab), clean the filter (if any), and replace batteries and light bulbs when necessary.



Home Maintenance Guide

- For security systems, check that the alarm and circuits are in working order; inspect the sensors one by one; and check primary and backup batteries once a month.
- Inspect all doors and windows for proper operation and a tight fit. Clean all window tracks, clean and adjust door thresholds, and check the weather-stripping on windows and doors. Preventing unwanted outside air from leaking into your home will reduce your energy bills.
- Check the attic insulation to be sure the entire ceiling area is covered.
- Make a careful safety inspection of your home, inside and out, to seek out problem areas before someone is injured.
- Make periodic checks of storage areas, backs of closets, basement corners, etc., to be sure no oily rags, un-vented gas cans, painting supplies, or flammable cleaning materials have been forgotten. These items could be a fire hazard and should be discarded. Many local fire departments will provide free home safety inspections.
- Check stairs, steps and ladders for broken or hazardous areas that could cause an accident. Check handrails and railings for sturdiness and reliability. Test all the lights located in infrequently used spaces to be sure they work when they are needed.
- Check all connections to your electrical system to correct any possible hazards. Replace frayed electrical cords and do not overload extension cords.
- Check GFCI outlets are working properly monthly.

Make a detailed checklist of all inspections and repairs required in your home. Leave spaces so that you can record the items as completed.