



**ANCHOR-SAFE**  
HOME INSPECTIONS, LLC

# **Homeowner Maintenance Guide**

**The little book is to help YOU maintain your new Home.**

**Remember to always review your Mfr. Maintenance Guides for each of your home appliances and mechanical equipment prior to performing any repairs or maintenance.**

**Any electrical, Plumbing, and HVAC work should be performed by a licensed, bonded, and insured contractor in the state the service is being performed.**

## **Cracks**

### **Concrete Slabs and Driveway Cracks:**

Concrete slab-on-grade floors cannot be expected to be crack-free. Most cracking is minor and is the results of large areas of concrete shrinking as the concrete cures. You can repair these cracks with an easy to do yourself filler from you local hardware store.

### **Patching Cracks**

The technique for patching cracks will depend on the size of the crack.

### **Narrow cracks**

1. Remove any loose debris from the crack and surrounding area with a wire brush and broom.
2. Narrow cracks can be filled with masonry crack filler that comes in a cartridge designed to be used in a caulking gun. Or you can fill the cracks with a vinyl concrete patching compound applied and smoothed with a putty knife. Vinyl concrete patching compound does not require the use of a bonding agent.



#### **SAFETY NOTE:**

Wear gloves, safety glasses, long sleeves and long pants when drilling, hammering or chiseling concrete.



## **Caulking Your Home**

### **Windows:**

Windows should be properly adjusted and balanced. Normal maintenance by the homeowner includes keeping the tracks, channels and operating mechanisms clean and lubricated. You as the homeowner should caulk the outside of the window every year. This will keep water outside and not inside.

## Caulking your Kitchen and Bathrooms:

We recommend that you recaulk your Kitchen and Bathroom every year. So that way no water can get behind your back splash guards or around your sink the last thing you need as a homeowner is to have water damage to your cabinets. Another big issue is your showers, if you have tile or solid backing you **Should** caulk them every year or as needed. Mold may start to grow at the bottom of the shower around the caulk this is ok. It can be cleaned. Here are some tips on different types of caulk and how to clean your show tile.

## Caulk Buying Guide

Making the decision to touch up the caulking around your home is easy. The hard part comes when you get to the store and realize how many different kinds of caulk there are to choose from.

### Latex vs. Silicone

One of the most often-asked questions about caulk is whether to choose latex or silicone. Each has its advantages and disadvantages, so use the information below to guide your choice.

| Latex Caulk*   | Silicone Caulk  |
|--|---|
| Is easier to apply than silicone caulk.                                    | Is more difficult than latex caulk to apply. Needs meticulous surface preparation.                        |
| Can be painted.  | Cannot be painted.  |
| Cleans up easily with soap and water.                                      | Requires mineral spirits for cleanup.   |
| Has less of an odor than silicone caulk.                                   | Has more of an odor than latex caulk.   |
| Is easy to remove when it needs to be replaced.                            | Is more difficult to remove when it needs to be replaced.   |
| Weakens and loses flexibility in direct sunlight and temperature extremes. | Is more flexible and durable than latex caulk. Holds up well in direct sunlight and temperature extremes. |
| Does not last as long as silicone caulk (under most circumstances).        | Lasts longer than latex caulk (under most circumstances).   |
| Can be applied on porous or non-porous surfaces.                           | Works best on non-porous surfaces.  |
| Better suited for gaps that stay constant.                                 | Works well in gaps that expand and contract.  |

\* Note that latex caulk is sometimes called "painter's caulk," or "latex/acrylic caulk."

Many companies now make caulks that are combinations of latex and silicone. They are often marketed as "siliconized latex" or "latex plus silicone." These products offer the ease of use of latex with the added durability of silicone. But for the harshest conditions — particularly for exterior use in places that get extreme weather — 100 percent silicone is best.

## Specialty Caulks

Beyond the latex/silicone decision, there are many more specialty caulks to choose from — each designed for a particular task. While an all-purpose caulk might work sufficiently in many situations, the best results will always come from using a material that is designed for the specific conditions you have.



Some caulk formulas combine the best qualities of latex and silicone.

## Some of the specialty caulks available are:

- Adhesive caulk used when attaching two pieces together or filling a gap.
- Kitchen and bath caulks that contain a material that fights mildew growth.
- Mortar caulk designed to hold up under high heat.
- Siding and window sealant.



Adhesive caulk

Kitchen and bath caulk

Mortar and concrete caulk

Siding and window sealant

Gutter and flashing sealant

Blacktop and roof sealant

- Roof sealant to stop minor roof leaks.
- Concrete sealant to fill cracks in driveways and sidewalks.
- Gutter and flashing sealant.
- Blacktop asphalt sealant.
- Caulk made of special material rated for its ability to block fire. This caulk is usually red.

## A Word About Color

Because latex caulk will take paint, you can use white caulk and paint it to match any place you're using it. When using silicone caulk, remember to choose a color that most closely matches the surrounding area, or select clear for an unobtrusive look.

Some specialty caulks, such as the fire-blocking material, come in specific colors.

## Application Tools

The classic method for applying caulk is with a gun, into which you place tubes of caulk. Many companies now also sell their products in squeeze tubes or in aerosol cans with narrow tips — both of which eliminate the need for a caulking gun.

The squeeze tubes work well for small jobs, but for large areas it is easier to draw a good caulk bead with a gun. The narrow-tipped aerosol cans are particularly helpful for caulking in tight areas.

## How to Clean Your Ceramic Tile Shower:

To restore your ceramic tile shower to near perfect condition, you are going to need several things. Get a new scrub brush that has stiff nylon or plastic bristles, a roll of paper towels, a gallon of chlorine bleach, a gallon of white vinegar, a spray bathroom cleaner or ultra mild abrasive cleaner. The stains and dirt have taken months to accumulate. The entire process is going to take place over a period of hours and possibly several days.

The first thing to do is to use the scrub brush to remove as much mildew, dirt, soap film etc. as possible from the tile and grout. Get into the shower and scrub well using lots of water and plenty of cleaner. Rinse often and do whatever is necessary to make the tile surfaces shine like a mirror. Don't worry that the grout is still gray with deeply embedded mildew. We will deal with that shortly. After this cleaning process, you will probably have some dull stains that won't budge. These are very likely hard water deposits. You will remove those using some paper towels and white vinegar. Saturate some paper towels with the vinegar and place them over the hard water stains. Do this on the floor and any vertical surfaces. The wet paper towels will readily cling to vertical surfaces. Vinegar is a very mild acid and it works slowly but efficiently to dissolve the alkaline water deposits.

Stop back every hour to make sure the towels are still wet with vinegar. Pull away a towel and scrub the deposits. They may completely wash away. If they do not, pour fresh vinegar on the towels to continue the cleansing chemical reaction. Heavy deposits can take up to eight hours or so to completely melt away. The trick is to keep fresh vinegar on the towels.

Once you have all of the hard water deposits removed, clean the shower again to remove all traces of vinegar. It is now time to attack any residual mildew that has stained the grout. You are going to use the pure chlorine bleach and the remaining paper towels to accomplish this task. Saturate as many towels as necessary and put these in contact with the mildew stained grout. It can take hours and possibly days to bleach out all of the mildew in the grout. Be careful not to splash the chlorine bleach in your eyes or on any fabrics or carpets. It can harm you and it removes color from dyed fabrics.

If you are allergic to chlorine bleach or the chlorine fumes bother you, use oxygen bleach to remove mildew. You use the same techniques as described above, it just might take a little longer. Oxygen bleach is color and fabric safe. It is also excellent for people who have septic systems. Chlorine bleach that escapes from the tub or shower into the drain system can kill beneficial bacteria in the septic tank. Oxygen bleach actually helps this bacteria!

To prevent the staining problem in your shower, it helps to understand mildew. It is an organism that requires food and water to live. Showers and bath areas provide the moisture and you provide the food every time you use soap, shampoo, cream rinse, etc. Even the dirt and oils you wash from your skin and hair, are food for mildew. If you minimize or eliminate the food and water, you can eliminate the mildew.

The best way to defeat mildew is to clean the shower every two weeks. Every day after you have showered use a plastic cup to pour clean water down the sides of the tile. Then use a squeegee to quickly wipe down the tiles directing as much water as possible to the shower drain. These two simple steps will remove a huge amount of food and water from the shower each day. When you get ready to leave the bathroom, open the shower curtain or shower door. Keep the bathroom door open as well. You want as much air to circulate in the shower as possible. This will dry all bath surfaces quickly and rob any microscopic mildew spores of water.

## Carpets

### How to Care for Your Carpet

Your carpet is a major investment, and like anything else, it will last longer with the proper care. Even with today's high performance fibers, you'll want to do everything you can to prevent stains and to treat them carefully and immediately when they occur. With a little extra time and attention, you'll keep your carpets looking newer longer. To keep your carpet in the best shape possible, you'll need to follow a simple maintenance routine to protect your investment.

Vacuum your carpet regularly, especially in high traffic areas. 80 percent of soil in carpet is dry and can be removed with the vacuum cleaner.



With careful maintenance, your carpet can look newer longer.

- Use a vacuum with a beater bar and brush, and be sure it's set to the correct height for your carpet pile. If the setting is too high for your carpet, you may not be cleaning it effectively. If it's too low, your carpet will get unnecessary wear and tear from the vacuum cleaner. Changing the direction of the cleaner frequently will make vacuuming more effective. This regular maintenance will improve the overall appearance of the carpet.
- Change the bag often to maximize the effectiveness of your vacuum cleaner.
- You'll need to deep clean your carpet about every two years. With today's advanced fibers, be sure to follow the manufacturer's instructions for cleaning. You can choose professional or do-it-yourself steam or dry cleaning. If you choose professional cleaning, be sure to use a reputable service and get them to perform a visual inspection of the carpet before giving you a quote.
- High traffic areas will need to be cleaned more frequently by spot cleaning or with a steam cleaner. (There are excellent household steam cleaners on the market that are the size of a vacuum cleaner and are ideal for frequent cleaning).
- If you choose a self-cleaning method, be sure follow the instructions provided with the steamer or self-cleaning product.



## Spot Cleaning

Mishaps and stains are inevitable. Your best bet may be to choose a stain-resistant carpet that resists soil and cleans easily. If your carpet is stain treated with a product like Scotchgard, you'll need to follow that manufacturer's instructions for cleaning to avoid voiding the stain warranty.

Familiarize yourself with how to treat stains before they occur. You'll have the most success if you treat them immediately. Always blot the area to be cleaned. One of the best agents to use on water based spills is club soda. Keep a bottle handy at room temperature for emergencies. After blotting to remove a spill, dribble it on, let it set for a moment, then blot again to remove the stain.

If the stain persists, locate it on the chart below and follow the appropriate cleaning steps outlined.

| Stain Type       | Cleaning Method | Stain Type               | Cleaning Method |
|------------------|-----------------|--------------------------|-----------------|
| Asphalt          | D               | Iodine                   | A, E            |
| Beer             | A               | Kool-Aid                 | A               |
| Beet Juice       | B               | Latex Paint              | A               |
| Blood            | A               | Lipstick                 | D               |
| Cherry Cola      | A               | Medicine (FD & C Colors) | A               |
| Chocolate        | D               | Mouthwashes              | A               |
| Coffee           | D               | Motor Oil (Used)         | D               |
| Cola             | A               | Mustard                  | A               |
| Cooking Oil      | D               | Nail Polish              | G               |
| Cough Syrup      | A               | Oil Paint                | D               |
| Cranberry Juice  | B               | Orange Juice             | A               |
| Crayon           | D               | Orange Soda              | A               |
| Dirt             | F               | Pet Feces                | C               |
| Egg              | A               | Pet Urine                | C               |
| Felt Marker      | D,E             | Prune Juice              | B               |
| Furniture Polish | E               | Red Clay Soil            | F               |
| Furniture Stain  | D               | Rouge                    | D               |
| Gelatins         | A               | Rust                     | A               |
| Grape Juice      | B               | Shoe Polish              | D               |
| Grape Soda       | A               | Slime (Toy)              | H               |
| Grease           | D               | Tea                      | D               |

|                             |   |                     |   |
|-----------------------------|---|---------------------|---|
| Hawaiian Punch              | A | Vomit (Human & Pet) | C |
| Ink (Water Soluble)         | A | Water Colors        | A |
| Ink (Ball Point, Permanent) | D | Wine                | B |

### Cleaning Methods

|          |  |
|----------|--|
| <b>A</b> | <ol style="list-style-type: none"> <li>1. Blot excess stain or liquid.</li> <li>2. Soak with lukewarm water one minute and blot with sponge or paper towel.</li> <li>3. Repeat until no stain is evident on towel or sponge.</li> <li>4. If stain persists, use 1/2 teaspoon liquid hand/dish detergent without lanolin, mixed with 1 pint water and press into stained area with fingers. Blot excess, rinse with clear, lukewarm water to remove detergent and blot dry.</li> <li>5. If stain persists, add water again, fold paper towel and place over stain with weight. Check towel every five minutes, or until it is stain free (this procedure may need to be repeated with deep stains).</li> <li>6. Brush up pile and allow to dry before walking on carpet.</li> </ol> |
| <b>B</b> | <ol style="list-style-type: none"> <li>1. Blot excess stain or liquid.</li> <li>2. Soak with lukewarm water one minute and blot.</li> <li>3. Apply hydrogen peroxide, immediately follow with household ammonia and blot. **</li> <li>4. Rinse with water and blot.</li> <li>5. If stain persists, follow guidelines 4-6 of Method A.</li> </ol>   |
| <b>C</b> | <ol style="list-style-type: none"> <li>1. Blot or scrape off excess stain or liquid.</li> <li>2. Vacuum particles and soften stain with alcohol or dry cleaning solvent and blot immediately.</li> <li>3. If stain persists, follow guidelines 4-6 of Method A.</li> </ol>   |
| <b>D</b> | <ol style="list-style-type: none"> <li>1. Blot excess stain or liquid.</li> <li>2. Wet stain with alcohol or dry cleaning solvent and blot dry immediately. Repeat 2 times.</li> </ol>   |



|          |   |
|----------|---|
|          | <ol style="list-style-type: none"> <li>3. If stain persists, follow guidelines 4-6 of Method A.</li> </ol>  |
| <b>E</b> | <ol style="list-style-type: none"> <li>1. Blot to remove excess stain or liquid.</li> <li>2. Rinse with clear, lukewarm water and blot dry.</li> <li>3. If cleaning method fails to remove stain, have affected area replaced (plugged) by professionals.</li> </ol>                                      |
| <b>F</b> | <ol style="list-style-type: none"> <li>1. Allow area to dry and vacuum excess.</li> <li>2. Soak with lukewarm water for one minute and blot with sponge or paper towel. Repeat until no stain is evident on towel or sponge.</li> <li>3. If stain persists, follow guidelines 4-6 of Method A.</li> </ol> |
| <b>G</b> | <ol style="list-style-type: none"> <li>1. Blot excess.</li> <li>2. Apply nail polish remover and blot immediately. Repeat until no stain is evident on blotter.</li> <li>3. Brush up pile and allow to dry before walking on carpet.</li> </ol>   |
| <b>H</b> | <ol style="list-style-type: none"> <li>1. Scrape off excess.</li> <li>2. Soften stain with vinegar and blot with lukewarm water. Repeat until no stain is evident on blotter.</li> <li>3. If stain persists, follow guidelines 4-6 of Method A.</li> </ol>  |

**\*\*Cleaning Method B suggests the application of hydrogen peroxide followed by household ammonia. The use of hydrogen peroxide alone for food dye stains is often sufficient. By immediately adding ammonia, you raise the pH of hydrogen peroxide, which dramatically accelerates the bleaching process. Hydrogen peroxide contains approximately 0.001% phosphoric acid for the very purpose of slowing down the bleaching process. Finally, hydrogen peroxide in itself ages very rapidly (which explains the need for the brown bottle) Shelf life for spot cleaning purposes is only 3 to 6 months. It is suggested that you use a hydrogen peroxide/ammonia solution only on white and off white colors.**

## Common Carpet Problems and Solutions:

**Crushing** is caused by both furniture and foot traffic. The weight of furniture crushes a carpet's pile. Furniture glides or protectors help to distribute the weight of the furniture from pointed "feet" that may dig into the carpet. Changing traffic patterns in a room by rearranging the furniture can help reduce crushing caused by heavy traffic patterns. Frequent vacuuming helps to raise the pile.

**Static** occurs with cool temperatures and low humidity. Choosing carpet with anti-static protection or using a humidifier will help the problem.

**Shedding** is most common in wool carpets. New, cut pile carpet will also shed for awhile until the loose fibers are eventually removed with the vacuum cleaner.

**Pilling** is a condition, usually caused by traffic in certain areas, where small balls of fiber appear on the carpet's surface. If the pilling is minimal, just clip it to reduce the appearance. If it's extensive, call a professional.

**Snagging** occurs when sharp-edged objects such as furniture, toys or pet claws snag the carpet fiber. Simply clip off the snag if the affected area is small.

**Sprouting** is a condition where small tufts of fiber stick out above the carpet surface. Clip the individual sprouts level with the carpet. Never pull them or you may pull other fibers in the process and further the damage.

**Fuzzing** makes the carpet appear "hairy" and is generally caused by slack yarn twist or fibers breaking out of the yarn during wet cleaning or servicing. If this occurs, it needs to be sheared by a professional cleaner.

## Drywall

### Patching and Repairing Drywall

Since World War II, drywall (also known as wallboard or gypsum board) is the material most commonly used for interior walls because it is quicker to install than plaster. It is also easier for the average homeowner to repair. Here are several methods for fixing surface defects ranging in size from the smallest dent to large holes of a foot or more.



Holes in drywall can easily be repaired by a do-it-yourselfer.

### Filling Dents

1. Clean off loose edges. Sand the depression to roughen its surface. Dip a joint knife into the compound sideways and load about half the blade width. Pull the knife across the dented area with a slow smooth stroke. Position the knife at a 90-degree angle and pull across again to remove excess compound. If the patch shrinks as it dries, apply a second coat.
2. To blend in the repair with its surroundings, sand it very lightly — or smooth it out by wiping with a dampened sponge.
3. Joint compounds, being relatively porous, must be primed before you paint them. Some paints also serve as primers.

### Mending Split Tape

1. Begin by carefully pulling away the loose tape. Use a sharp knife at edges or you may pull off material from either side as well.
2. Apply compound to the wall, position the new tape, then smooth out any bubbles with light, vertical knife strokes.
3. While the compound is still wet, apply a second coat. Let it dry, then lightly coat again, feather out the edges, and sand or sponge.

### Setting Popped Nails

1. Press the panel against the stud, then drive new nails above and below the old one. Ring-shank types have better holding power.

2. Dimple each nail below the surface with your last hammer blow. Pull the popped nail and fill dimples with compound.
3. After the compound dries, apply a second thin coat, feathering it out at the edges. Wait a day, then sponge, prime, and paint.

## Iron-on Patches for Small Holes

1. Cut the polymer fabric to size and iron with a household iron set at medium heat.
2. Apply compound over fabric and sand when the compound has dried.
3. Always wear a dust mask while sanding joint compound.

## Patching Holes 1" to 5"

1. Clean away loose drywall and cut off any loose paper. Leave the inner part of the gypsum rough. Cut a piece of wire screen 2" larger than the hole all around. Tie one end of a 12" string to a small stick or pencil, and thread the other end through the center of the screen.
2. Bend the wire screen and insert the stick and screen into the hole. Pull the string until the stick holds the screen flat against the back of the hole. Holding the string taut, fill the hole, working in from the edges. Make sure the compound adheres to the wire screen. Tape the string tightly against the wall with masking tape.
3. When the compound has dried completely, cut the string flush to the wall. When using joint compound, remember it will shrink; apply another layer to bring the patch even with the wall. A third layer may even be needed.

## Patching Holes 5" to 8"

1. Measure the size of the hole you need to repair. Cut out (at a bevel) a rectangular piece of drywall at least an inch larger than the hole you are patching. Using the patch as a template, place it over the hole and trace. Cut out using the tracing as your guide at the same bevel as the patch.
2. If the patch does not fit well, trim as needed with a utility knife. Spread compound around the beveled edges and fit the patch into place using a little pressure.
3. Smooth compound around the edges of the patch on the wall. Smooth it out and put drywall tape over all joints with the joint knife. At the end of each joint, press the edge of the knife blade in firmly and use as a straightedge to tear off the tape. Sand when dry.

## Patching Larger Holes with Backer Boards

1. Measure the size of the hole you need to repair. Cut out (at a bevel) a rectangular piece of drywall at least an inch larger than the hole you are patching. Using the patch as a template, place it over the hole and trace. Cut out using the tracing as your guide at the same bevel as the patch.
2. Insert a backer board with construction adhesive applied to the ends. Hold the backer board firmly in place and screw drywall screws through the drywall into the board, at least 1" away from the edge of the hole. Repeat if using two backer boards.
3. Place the new piece of drywall in the hole and fasten it to the backer board(s) with screws.

4. Smooth compound around the edges of the patch on the wall. Smooth it out and put drywall tape over all joints with the joint knife. At the end of each joint, press the edge of the knife blade in firmly and use as a straightedge to tear off the tape. Sand when dry. Finish as shown next.

## Finishing After Repairing

1. With both large and small drywall repairs, finishing is the same. Using a wide joint knife, spread a smooth, thin layer of joint compound over the repaired area or over all joints of the new patch. Be sure to extend beyond the damaged part and feather the edges out to the surrounding wall.
2. Wait at least 24 hours. The compound should be dry before you sand it. Use a fine-grade drywall sandpaper on a sanding block. Wear a dust mask when sanding. You may have to repeat both these steps to achieve the desired results.

# Plumbing

## Clearing Clogged Drains

As the pool of water collects around the drain, you get a sinking feeling in your stomach. You dread another costly visit from the plumber. However, clogged drains are usually easy enough to correct on your own. An average homeowner should be able to clear most clogs in two hours or less, depending on the severity of the clog.

## Where is the Clog?

When faced with a clogged drain, the first thing you need to do is to figure out where the clog is. If only one sink, shower, bath, or toilet in the house is backing up, relax. Your task should be fairly simple since the clog is probably confined to the trap of that fixture. If more than one fixture is clogging up, the blockage will usually be in the main drain line. Unclogging the main drain is a little more difficult, but not impossible.

## Cleaning Strainers and Stoppers

Many clogs collect around the strainer or stopper in the sink or bathtub. To unclog the drain, all you may need to do is remove the strainer and clean it. Here are a few tips:

- If there is a strainer over the clogged drain, you should remove any screws holding the strainer in place and then pry the strainer up with the tip of a standard screwdriver. When the strainer is loose, remove and wash away anything that has collected around the strainer. Clean around the top of the drain.
- Stoppers need to be cleaned on a regular basis since hair tends to twist around their base. First remove the sink stopper. Some stoppers are removed by turning them with your fingers. Others require that you unscrew a pivot rod that is connected to the opener. This rod should be located under the base of the sink. If you need to use pliers to remove the stopper, make sure to pad them so you won't chip the chrome finish. Once the stopper is removed, clean it and wipe out the base of the drain opening.

## Using the Plunger

One of the most trusted tools for unclogging drains, the plunger, can usually clear the blockage if it's not too far into the main drain. Follow these tips to make plunging more effective:



Plunger

- Block the overflow holes, other drains in adjacent sinks, or any other openings by stuffing wet rags into the holes.
- If water is not already present in the basin, run two to three inches of water over the drain hole. The water helps to force the obstruction out of the way and lets you know when you succeed in pushing the clog out.
- Apply a thick layer of petroleum jelly to the rim of the plunger. The petroleum jelly helps to create a tighter seal, thereby producing greater suction.
- Force the plunger handle down powerfully numerous times. After plunging for a minute or two, stop to test whether water will drain from the sink. Try plunging again if the drain is still sluggish. When clear, run hot water to flush away any remaining particles from the clog.

## Cleaning the Trap

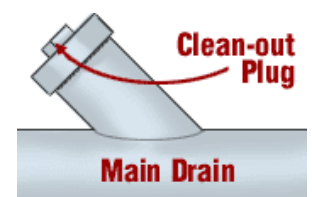
If a plunger won't clear the clog, you'll need to clean the trap under the sink as follows:

1. Make sure you have a bucket in place to catch waste water.
2. Check to see if there is a clean-out plug in the trap; it will be a square or hexagonal plug in the base of the bend. If so, remove the plug and push a straightened coat hanger or bottle brush around the bends of the trap to remove debris.
3. If the trap does not have a clean-out plug, remove the trap by loosening two couplings that hold the trap in place. If you have chrome pipe fittings, you'll need to pad the water pump pliers to protect the finish. Penetrating oil may help to loosen a stubborn trap joint.
4. Hold the trap over the bucket and insert a straightened coat hanger or bottle brush into the trap. Force the hanger or bottle brush around the curves and push out debris.
5. Wash the trap with hot, soapy water.
6. Before reconnecting, check the trap for wear or corrosion. The metal or plastic material may begin to thin and start to leak. If you notice wear, replace the trap. When you reassemble the trap after cleaning, you may need to reseal the threads. Use pipe joint compound or Teflon tape.

## Using a Sewer Snake

If the trap is clear and the drain still clogs, the blockage is further into the sink's drain pipe or the main drain. To clear these drains, you'll need a plumber's auger or, as it is more commonly called, a sewer snake. Use as follows:

1. With the trap removed, insert the snake into the sink drain line and push in until you meet the obstruction.



2. When the tip of the snake is against the clog, try to hook the clog by twisting the snake's handle clockwise.
3. When the debris is solidly hooked, twist and push the clog back and forth until you break up the clog. Flush the pipe with cold water.
4. Once the clog is gone, reassemble the sink's trap. When you reassemble the trap after cleaning, you need to reseal the threads. Use pipe joint compound or Teflon tape. Run water for a few minutes to make sure the clog is completely flushed and the trap is not leaking where it has been reconnected.

## Clearing With Chemical Drain Cleaners

If the methods above fail, the next logical step is to use a chemical drain cleaner. Fast-acting chemical drain cleaners usually contain a high concentration of lye or sulfuric acid to burn through all sorts of tough clogs quickly and thoroughly.

When using a chemical drain opener, make sure to read and follow all of the directions and warnings on the bottle. After following the directions on the bottle, remember to run plenty of water to flush the chemicals out of your pipes.

## Unclogging the Main Drain

If more than one sink, bathtub or toilet is clogged, you'll need to clean out the main drain line or the sewer.

1. To clean out the main drain line, find the clean-out plugs located on the large drain pipes. Look for these plugs on the vertical pipes in your basement or crawl space. In some houses these drains may be located in a garage or pantry closet, or there may be access to these plugs outdoors along the foundations of your house. Usually these pipes will be vertical, but occasionally a plug may be located on a horizontal pipe.
2. When you find a steel or plastic cap for the pipes with a square fitting at the top, remove the fitting with a wrench. Be sure to have a waste bucket in place when opening up the drain.
3. Use a plumber's snake to break up any clogs. Make sure to insert the auger in both directions of the pipe. You can also use a powerful stream of water from your garden hose to break up any debris.
4. Replace the steel cap of the drain pipe.

## How can I Prevent Clogged Drains?

Okay, you've finally gotten that drain unclogged. You'd prefer never to experience the mess and inconvenience of a clogged drain again. Keeping your drains clear is probably easier than you think. With a few simple precautions, you can prevent your drains from clogging.

## Tips for the Kitchen Sink

- Pour grease into cans and throw them in the garbage. If you empty grease into the sink, the grease collects along the sides of the pipe and then food particles stick to the pipes, eventually contributing to a clog. Also too much grease can eventually cause sewer blockages since the bacteria in sewage systems cannot readily break down grease.

- When you are grinding up food in a disposal, run plenty of cold water to flush food particles down the pipe. Using too little water can contribute to the particles collecting along the sides of the pipe.
- Don't empty coffee grounds in the sink.
- Pour a kettle of boiling water down the drain once a week to melt away any fat or grease that may have collected.

## Tips for the Bathroom

- Clean the pop-up stoppers in sinks frequently. Hair often collects here and causes clogs.
- Never flush heavy paper products down the drain. Excess paper can clog the toilet and/or the whole sewer system.

## General Tips

- Never dump chemicals like paint or paint thinner down the drain. Avoid pouring hot wax or other substances in the drains.
- If you have your own home septic tank, have a professional inspect it every two to three years. Some regions require septic tank inspection on a regular basis. Check with your local health board about the rules in your community.
- Every six months, keep your drains running clear by using a non-caustic drain cleaner.

# Water Heater

## Maintaining Your Water Heater

Most people don't give much thought to their water heater - they just turn on the faucet and expect hot water to come out. Keep your water heater in peak operating condition by performing some simple maintenance. All you need are a few common household items and about an hour of free time.





## Check the Pressure Relief Valve Every Six Months

Both gas and electric water heaters have a safety device called a pressure relief valve. In the event the tank over-pressurizes, the relief valve opens and releases the pressure. If the valve does not operate correctly, the tank can over-pressurize and explode. To check the pressure valve:

1. Turn off the electricity to the water heater or turn the gas switch to pilot.
2. Shut off the cold water inlet to the water heater.
3. Position the bucket to catch water from the pressure relief valve.
4. Pull the trip lever on the valve. You should hear a slight rush of air or see some water and vapor exit through the pressure relief valve. If you don't, drain the tank and replace the valve.

### Flush the Tank Every Six Months

Sediment build up in the tank can reduce your water heater's energy efficiency and also clog your water lines. Avoid these problems and increase the life of your unit by flushing the tank each time you check the pressure relief valve. To flush the tank:

1. Turn off the electricity to the water heater or turn the gas switch to pilot.
2. Shut off the cold water inlet to the water heater.
3. Connect a garden hose to the tank's drain valve.
4. Locate the draining end of the hose in an area that won't be adversely affected by the scalding hot water.
5. With the pressure relief valve open, open the drain valve and allow the tank to drain completely. Completely draining the tank ensures that you have removed all of the sediment possible.
6. Close the tank drain valve, disconnect the hose from the valve and close the pressure relief valve.
7. Open all the hot water spigots in the house and turn on the cold water inlet to the tank.
8. Close each hot water spigot as water begins to flow from it. After all the spigots are closed, turn on the electricity to the water heater or turn the gas switch to "run."

Following these simple maintenance procedures every six months will keep your water heater operating safely and efficiently for years.

**SAFETY NOTE:**  
Always review MFR Maintenance Guide, wear gloves, goggles and other protective clothing while performing maintenance on your water heater.



# HVAC

## Choosing a Home Air Filter

Clean air is just as important inside the home as it is outdoors. The filters used with an heating and cooling system make a big difference in the quality of air circulating throughout the house. Choosing the right filter and changing it regularly will help your family breathe more easily.



## Filter Basics

Home air filters also commonly called "furnace filters" keep the coils and heat exchanges on the heating and air conditioning system clean. Dirty coils and heat exchanges make the system work harder, so keeping the filter clean helps prolong the life of your HVAC unit.

The most important thing to remember about home air filters is to change them regularly.

Of course, the filters also clean the air that you and your family breathe. The variety and amount of particles in your home's air will depend on how many people and pets live in the house and what types of activities go on there. People with allergies or asthma should be extra diligent about keeping home air filters clean.

The most important thing to remember about home air filters is to change them regularly. Even the highest-quality filter can't do its job right if it's clogged with a thick layer of particles it's been filtering from the air. Different filters are meant to be changed at different intervals, but once a month is a common time frame. Brand new homes, as well as homes where there is remodeling or construction going on, will need more frequent filter changes to compensate for the extra dust and residue in the air.



**Good idea:** Schedule your filter changes to coincide with another regular household activity, such as paying a monthly bill or giving pets their flea and heartworm treatments. You'll be less likely to forget if the two activities are linked in your mind.

## Material and Style

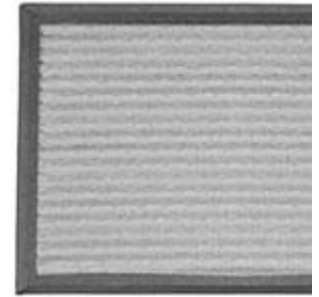
There are several choices of material and style to choose from when buying a home air filter. Performance is affected by the size and density of the material used, as well as the size and volume of the particles being filtered.

The least expensive filters have a layer of fibers, in some cases covered by a honeycomb-shaped grille. The material is often fiberglass, but filters made of natural materials such as hogs' hair and coconut fibers also are available, often by special order.



Fiberglass Filter.

Pleated filters made of a variety of materials are more efficient because the pleats provide a greater surface area to trap particles. Many pleated filters are electrostatically charged to help them attract and hold microscopic particles. Reusable filters are made of material that can be rinsed clean with water. Some filters for window air conditioners are made of foam.



Pleated Filter.

## Minimum Efficiency Reporting Value (MERV)

Most filters are labeled with a MERV rating number, which measures a filter's ability to trap particles ranging in size from 3.0 microns to 10.0 microns.

Residential filters commonly have MERV ratings of 1-12. The higher the MERV rating, the more efficient the filter is, and the more particles it can filter.

A MERV rating of 6 means the filter is 35% to 50% minimum efficient at capturing the measured particles.

A MERV rating of 8 means the filter is 70% to 85% minimum efficient at capturing the measured particles.

A MERV rating of 11 means the filter is 85% to 95% minimum efficient at capturing the measured particles.

MERV is an industry standard rating, so it can be used to compare filters made by different companies. Some manufacturers also have their own rating systems.

## Size and Shape

Most filters for residential HVAC systems are 1" thick, but some large houses (3,000 sq. ft. and more) require 4" filters because of the volume of air circulating in the home. The 1" filters come in a variety of sizes, so be sure to note what size you need before going to the store to make a purchase.

Adjustable filters are available for non-standard ventilation openings. Special sizes and shapes of filters are available for room air conditioners, as well as for register vents and return vents in the floors, walls and ceilings.



Special sizes and shapes of filters are available.

Remember to always review your Mfr. Maintenance Guides for each of your home appliances and mechanical equipment prior to performing any repairs or maintenance.

Any electrical work should be performed by a licensed, bonded, and insured electrical contractor in the state the service is being performed.