Reader’s Digest

Complete Do-it-yourself Manual

Home Repair and Home Improvement

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<td>Repairing rotted clapboard</td>
<td>saw</td>
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<td></td>
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<td></td>
<td>hammer</td>
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<td>Repairing popped nails</td>
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<td></td>
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<td>Patching hole in plaster wall</td>
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<tr>
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<td>Loosening binding door</td>
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<td>Replacing broken windowpane</td>
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<td>paint</td>
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<td>glazer’s point</td>
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<tr>
<td></td>
<td></td>
<td>glass</td>
</tr>
<tr>
<td>Replacing sash cord (with chain)</td>
<td>screwdriver</td>
<td>chain</td>
</tr>
<tr>
<td></td>
<td>chisel hammer</td>
<td>knife</td>
</tr>
<tr>
<td></td>
<td></td>
<td>string and weight</td>
</tr>
<tr>
<td>Loosening stuck window</td>
<td>hammer</td>
<td>wax</td>
</tr>
<tr>
<td></td>
<td>putty knife</td>
<td></td>
</tr>
<tr>
<td>Replacing socket or switch</td>
<td>screwdriver</td>
<td>tape</td>
</tr>
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</table>
Plumbing emergencies

General recommendations

A correctly designed and installed home plumbing system is practically trouble-free. Should problems occur, there are standard methods for dealing with them. And there are good reasons as well—a neglected leak inside a wall, on the floor, or in the ceiling can cause serious damage.

toilets have just one. The first thing to do in an emergency at a fixture is to close its shutoff valve. Most shutoffs are located just underneath the fixtures they control; some are in the basement, utility room, or crawl space below.

Most plumbing systems provide numerous shutoff valves for controlling water flow in the supply system. Sinks and lavatories have individual shutoffs for hot and cold water;

pipes that have frozen (and burst) will leak. Tightening a threaded joint or soldering a soldered joint may cure it. Burst pipes can sometimes be mended with a clamp-on pipe patch. If not, they must be replaced. Emergency clamp can

What to do in an emergency

Pipe leaks: Joints that have corroded and pipes that have frozen (and burst) will leak. Tightening a threaded joint or soldering a soldered joint may cure it. Burst pipes can sometimes be mended with a clamp-on pipe patch. If not, they must be replaced. Emergency clamp can

Appendix

<table>
<thead>
<tr>
<th>Job to be done</th>
<th>Appropriate hand tools</th>
<th>Useful power tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacing defective lamp plug</td>
<td>new plug, cutting pliers,</td>
<td>soldering gum, flux, tape</td>
</tr>
<tr>
<td></td>
<td>knife, solder</td>
<td></td>
</tr>
<tr>
<td>Replacing frayed lamp wire</td>
<td>new wire, screwdriver,</td>
<td>cutting pliers, knife</td>
</tr>
<tr>
<td></td>
<td>cutting pliers, knife</td>
<td></td>
</tr>
<tr>
<td>Correcting wobbly table or</td>
<td>lengthen leg with wood shim,</td>
<td>and brad or cut down with fine saw</td>
</tr>
<tr>
<td>chair</td>
<td>glue</td>
<td></td>
</tr>
<tr>
<td>Tightening loose chair rung</td>
<td>glue</td>
<td>long clamp</td>
</tr>
<tr>
<td>Removing cigarette burn on</td>
<td>wire brush</td>
<td>vacuum cleaner</td>
</tr>
<tr>
<td>rug</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unclogging stopped drain</td>
<td>toilet plunger, lye solution,</td>
<td>wrench, pail</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Securing loose or missing</td>
<td>awl, plaster mix, tile</td>
<td></td>
</tr>
<tr>
<td>ceramic wall tile or fixture</td>
<td></td>
<td>rags</td>
</tr>
<tr>
<td>Pasting down loose wallpaper</td>
<td>wallpaper paste, scissors,</td>
<td>water, rags</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoring loose floor tile</td>
<td>putty knife, sandpaper</td>
<td></td>
</tr>
</tbody>
</table>

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be made of piece of rubber and C-clamp.

**Sluggish or stopped sink drain:** First try a rubber force cup. If this doesn’t work, try a chemical drain-opener, following directions on container. If this doesn’t work either, put a pail under the trap and remove the plug. Use a wire to remove the debris, usually hair and grease. Replace plug and run water scalding hot to clean the drain and keep it clean.

**Leak in wall:** Most often caused by faulty riser pipe to a shower or to fixtures on the next floor. Best to get professional help. Plumber will tell you whether he can make the repair—installing new pipe—with or without cutting hole in the covering wall. Some communities insist upon access panels to pipes located behind walls.

**Scale-restricted supply pipes** are a problem in old houses and hard-water areas. Turn water on full force, first making sure all valves are fully open. If the water comes out fast and then slows, there is a restriction in the pipe. The cure? Replace all affected pipes. Avoid galvanized pipes; they are prone to scaling. Use brass pipe or copper tubing instead.

**Overflowing toilet tank:** A toilet tank overflowing into the bowl will be heard running long after flushing. Close the tank shutoff valve between tank and floor. See p. 222 for information on correcting this trouble. Take care when removing porcelain top—it is easily damaged. Place on heavy towel or pile of newspaper.

**Overflowing dishwasher:** The first thing to do: Turn off the valve controlling water supply to the dishwasher. Then check the screen around the drain. It may be clogged with grease or a rag. If water keeps flowing in before shutoff valve has been turned off, electrical controls may be at fault. Turn off current, or pull the plug if it is a portable model.
Repairs and maintenance

The most common complaint with dishwashers is that they are not washing properly. Before calling a serviceman to remedy this, study the machine's operating instructions to be sure you are following the pre-cleaning, loading, and detergent specifications recommended by the manufacturer. If you are doing everything properly, the next most probable cause for poor washing is too low a water temperature.

Water flowing into a dishwasher should be between 140 and 160 degrees. Check the gauge on the hot-water tank or heater to see if it is set properly.

Dishwashers occasionally require some simple maintenance such as cleaning out the drain strainer. If a residue of coarse food particles is left on dishes following a wash cycle, a clogged strainer is the most likely cause. Rinse it under a tap.

Another common dishwasher complaint is about leaks around the door during the wash cycle. This is a minor problem usually found in older machines. The rubber seal, or gasket, around the door deteriorates with age and loses its sealing qualities. On most machines, this is a simple replacement task. Buy a new gasket through a dealer in the appropriate brand and install it by reversing the steps you took in removing the old one.

If the machine will not start at all, check the fuse or circuit breaker before calling a serviceman. If a newly replaced fuse blows immediately, you can be sure that servicing is required.

Faulty timer switches are often the cause of dishwasher breakdown. This switch controls the machine's various wash cycles and automatically regulates the length of time for each cycle. The following symptoms indicate a faulty timer switch: Machine will not turn on (fuses or circuit breakers okay); machine runs through one or more cycles, then stops; machine continues to operate on one cycle and will not switch to the next one.

Timer switch replacement is fairly simple. First check the machine's make and model number. Obtain a replacement switch from a local dealer. The timer switch has numerous wires running to and from it. Reconnecting them will be easier if you draw a diagram showing the position of each before disconnecting them from the old switch.

For problems that do not seem to be related to the timer switch or cannot be solved by the simpler repairs mentioned, it is best to call in a repairman.

To expose the timer switch on most models, first remove the cycle control knob, then remove all screws holding the front panel in place.

Unplug the machine before touching the timer. Place the wires one by one from the old switch onto the new one to avoid wrong connections.

Clogged strainers are easily remedied by removing the unit for cleaning. Most units are plastic or metal and can be cleaned with a tap rinse.

Dishwasher Service Chart

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<tr>
<th>TROUBLE</th>
<th>POSSIBLE CAUSE</th>
<th>REMEDY</th>
</tr>
</thead>
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<tr>
<td>Machine fails to start</td>
<td>Door partly open</td>
<td>Close door securely</td>
</tr>
<tr>
<td></td>
<td>Defective switch or timer</td>
<td>Replace</td>
</tr>
<tr>
<td></td>
<td>Check switch linkage</td>
<td>Adjust, if necessary</td>
</tr>
<tr>
<td></td>
<td>Open circuit</td>
<td>Check fuse or circuit breaker</td>
</tr>
<tr>
<td>Dishes do not come clean</td>
<td>Wrong soap used</td>
<td>Use only recommended detergent</td>
</tr>
<tr>
<td></td>
<td>Improper loading</td>
<td>Load dishes as per instructions</td>
</tr>
<tr>
<td></td>
<td>Not properly pre-cleaned</td>
<td>Pre-clean dishes</td>
</tr>
<tr>
<td></td>
<td>Low water temperature</td>
<td>Adjust water-heater thermostat</td>
</tr>
<tr>
<td></td>
<td>Not enough water</td>
<td>Unclog water inlets</td>
</tr>
<tr>
<td></td>
<td>Strainer clogged</td>
<td>Remove strainer and clean</td>
</tr>
<tr>
<td></td>
<td>Timer faulty</td>
<td>Replace timer unit</td>
</tr>
<tr>
<td></td>
<td>Solenoid coil inoperative</td>
<td>Replace solenoid coil</td>
</tr>
<tr>
<td></td>
<td>Measuring coil inoperative or out of adjustment</td>
<td>Replace or repair as required (call serviceman)</td>
</tr>
<tr>
<td>Water does not stay in tank</td>
<td>Leaking drain valve</td>
<td>Tighten flange on drain valve</td>
</tr>
<tr>
<td></td>
<td>Inlet valve not opening</td>
<td>Adjust linkage, have solenoid repaired</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or replaced as required</td>
</tr>
<tr>
<td>Machine noisy</td>
<td>Solenoid core not centered in coil</td>
<td>Realign core to assure perpendicular and centered action</td>
</tr>
<tr>
<td></td>
<td>Motor out of alignment</td>
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<tr>
<td></td>
<td>Vibration</td>
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</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door or cover will not close</td>
<td>Door or cover seal binding inside of tank</td>
<td>Loosen screws on seal retainer and reset to retain seal</td>
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<td></td>
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<td></td>
<td>Check at inlets</td>
<td>Check inlet at machine</td>
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<td></td>
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<td></td>
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<td>Turn timer to heating cycle; check if heating element is working. If not, timer may be faulty. If timer okay, problem is with element</td>
</tr>
<tr>
<td>Dishes do not dry</td>
<td>Chemicals in water</td>
<td>Try reducing amount of detergent. A water softener or mineral filter may be required in areas having hard water</td>
</tr>
</tbody>
</table>

Appendix

Information Source 1
ing and musty odors. They can leave your kitchen walls greasy and cause paint to peel.

The solution is to vent the vapors to the outside or remove the moisture and grease by filtering the kitchen air. Venting can be done with a kitchen fan built into a wall near the range; filtering, by a ventilating hood directly above the range.

Exhaust fans come in a variety of shapes and sizes. All models require cutting through the kitchen wall for installation. There are two types of ventilating hoods: ducted and unducted. Ducted hoods require venting to the outside. This type of vent is best installed as part of a ducted system. In addition, the filters, which are made of strong aluminum mesh and fiberglass, granulated charcoal, or activated carbon, must be cleaned or replaced every few weeks. It is also a good idea to clean a ducted system at least twice a year.

In either the ducted or ductless ventilating systems the proper fan capacity, rated in cubic feet per minute (c.f.m.) of air delivery, should be a major consideration. Fan capacity must relate directly to the size of the room or area in which it is to function. Ventilating experts offer this guide for fan size in relation to square footage of floor space in a kitchen with an 8-foot ceiling:

- 60 sq. ft. — 120 c.f.m.;
- 110 sq. ft. — 225 c.f.m.;
- 160 sq. ft. — 325 c.f.m.;
- 200 sq. ft. — 400 c.f.m.

Lighting

Light in the kitchen should be of sufficient intensity that you can easily read the small print on food packages. It should be evenly distributed so that you can see into cabinet corners and so that you do not have to work in your own shadow. Light should help to make the room a cheerful, pleasant place to work. In some kitchens it may be possible to satisfy all these requirements by using carefully placed ceiling fixtures that do the job with virtually no additional local lighting fixtures. In most cases, however, ceiling fixtures will have to be supplemented by specific lighting of particular work centers.

As a general rule, every 50 square feet of kitchen takes a combination of ceiling and local fixtures that will supply 150 to 175 watts of incandescent or 60 to 80-watts of fluorescent lighting. Plan on a 30-watt fluorescent fixture mounted 22 inches above the range; two 30- or 40-watt fluorescents above the sink; two 20-watt fluorescents set just under the cabinets over each 30-inch length of counter. A minimum of 150 watts incandescent is recommended for a dining area. The use of light colors for the walls and ceiling of the kitchen will further brighten the room and decrease the amount of artificial lighting required.

It is most important to plan the wiring in the kitchen so that it is adequate to handle all the appliances and lights in use at any one time. Provide wiring that permits countertop appliances, such as coffee maker, toaster, and blender, to be plugged in to an electrical circuit that is separate from the major appliance circuits (p. 256).

Some planning do's and don'ts

1. Do include adjacent to your range a heat-resistant work counter on which hot baking dishes, saucepans, etc., can be placed for serving. A minimum width of 9 inches is recommended.

2. Don't install a built-in oven too high. Place it so that the oven door opens out to about the same level as the countertops—36 inches from the floor. Or mount the oven to position the open door 2 inches below the elbow of the homemaker.

3. Do make your kitchen aisle wide enough to permit all appliance doors and cabinet doors and drawers to open fully without interfering with each other. Minimum recommended aisle is 42 inches; 48 inches is better.

4. Don't install your dishwasher next to the refrigerator if you can avoid it. Both refrigerator and dishwasher emit heat; thus they will work more efficiently and last longer if separated. If they must be placed side by side, insert a panel of insulation between them.

5. Do allow ample space between range and sink. This is the busiest area in the kitchen. Too little space between range and sink increases the risk of brushing against a hot pan or knocking it off the stove.

6. Don't place a dishwasher at right angles to the sink. In such a position the dishwasher door, when open, blocks access to the sink and makes movement awkward.

7. Do eliminate kitchen doors that open against the face of an appliance. Hang doors on the other side of the door jamb, hinge them to swing out rather than in, or use a sliding door.

8. Don't place oven and burners side by side if installing a countertop range with separate oven. Leave at least 9 inches of counter space between them to manipulate hot pots, pans, and dishes. This counter space should be covered with a heat-resistant material.

9. Do plan corners so that these awkward spaces are put to good use. Cabints with revolving shelves work well in corners. Major appliances do not; their doors interfere with other doors and drawers.

10. Don't overlook ventilation. Try to place the range where it will be convenient to vent cooking odors and moisture to the outside. Consider installation of a through-the-wall air conditioner to ensure maximum comfort.