

HOME PLUMBING PROBLEMS

Tools for Home Plumbing Repairs

Tools make the difference between the possibility or impossibility of home repair. The cost can be spread over the many jobs these tools can do, or some of the tools can be rented.

A basin wrench is necessary to reach up under a sink or lavatory and work in the small space, since the head of the wrench lays at right angles to the handle. Other useful tools include an adjustable end wrench, two or three sizes of regular and Phillips screwdrivers, smooth-jawed drain-pipe wrenches, a faucet seat reamer (if operated according to furnished instructions), a suction plunger, and a cleanout auger.

To protect the chrome finish on large nuts, wrap the nut with cloth or paper tape before using a pipe wrench or large channel-lock pliers. Do *not* use ordinary pliers on any plumbing fixture, as extensive damage can be done with this tool. A rusted or corroded nut can be loosened with a penetrating oil or a cola drink.

Clogged Drains

Prevention is best

Sinks should have strainers. Grease, coffee grounds, and hair should be kept out of drains. If grease gets into a drain, flush it with cold water only. (Hot water cools quickly and the dissolved grease deposits on the pipe, gradually building up a clog.) Melted candle wax poured into a sink will cause a real problem. It is a good idea to flush sink traps and drains once a week by filling the sink with water and then removing the drain stopper. This allows the sinkful of water to flush the trap and drainpipe. If a dishwasher discharges through the drain, it accomplishes the same purpose.

Lavatory pop-up drains should be pulled out and cleaned regularly. Soap curd plus hair causes clogs. Do not comb hair over a lavatory.

Toilet drains are stopped up by almost anything other than toilet paper, including facial tissue (wet strength), paper towels, cloth, disposable diapers, and foreign objects.

Laundry trays should be outfitted with perforated metal strainers (available at hardware store). Pockets of dirty clothes should be checked before laundering for items that could get into the drain. Washing machines without a filtering system can be equipped with a nylon stocking foot on the end of the drain hose to catch lint. Never put paint, varnish, or lacquer down a drain.

Outside faucets should be protected against freezing. Hoses should be disconnected, even from "frostproof" faucets.

How to use a suction plunger

Partly fill sink or toilet bowl with water. Place suction cup over the mouth of the drain opening. Work the handle up and down, keeping the cup directly over the mouth of the drain. Repeat until obstruction has been forced down or drawn up. If suction does not clear the pipes, remove the trap and clean. If drain is still clogged, use a cleanout auger (snake).

How to use a cleanout auger

This flexible steel cable usually will not go down the drain opening, but will have to be put into the trap. Guide the cable down the drainpipe; use a thrusting and twisting action. If the cable runs into an obstruction, use a back-and-forth motion, twisting the handle close to the drainpipe opening. When water will run through the drain, remove the cable and reassemble the trap. Flush with large quantities of cold water.

How to use chemical drain cleaners

Chemical drain cleaners are either a strong caustic or a strong acid. Some kinds are capable of destroying tree roots in sewer lines. All are dangerous to people, especially to skin and eyes. If you use a chemical cleaner, observe all of the precautions and warnings on the label. Goggles will insure protection for eyes. Spills on hands or clothing should be washed with cold water

immediately. Chemical cleaners should be stored where children cannot reach them. Repeated use of chemical cleaners may erode the drain fittings, which are made of less durable metal than drainpipes. Do not use if the drain is completely clogged. *Never* use a suction plunger after drain cleaner has been put into the pipes. *Never* use a different chemical cleaner after one cleaner is in the drain.

Leaking or Clogged Faucets

Clogged faucets

The wire screen at the end of the faucet may need to be unscrewed and cleaned out. If the flow of water into a washing machine is slow, check the screen between the faucet and the back of the machine.

Leaking faucets that use washers

The parts of the faucet (from the top down) are handle, packing nut, packing, valve stem (ribbed end up), washer, and valve seat. After shutting off the water directly below the fixture or at the main shut-off valve, open the faucet and drain out any water left in the pipe. The unscrew the cap nut and remove the handle and valve stem section, which has the washer at the bottom. Carefully remove the screw that holds the washer (tap gently or add a couple drops of kerosene to loosen). Replace the washer with the same size and type, and reassemble into the valve stem.

Next check the valve seat. If this is corroded, it must be smoothed out with a faucet seat reamer or replaced. Some faucet designs require special tools and the faucet can be taken to a plumbing shop. Some plumbers loan tools on a deposit system. Another solution may be the use of a special insert stem that replaces the threaded spindle. The insert stem plugs the old seat and provides a new closure seat in the stem. These require more care in fitting to insure tight, leakproof operation.



If water leaks around the handle, the packing nut may be tightened. If it still leaks, and there is a washer under the packing nut, replace the washer. If there is no washer, wrap the spindle with "packing wicking." Newer faucets may utilize "O" rings in place of packing. These are available at hardware stores.

Leaking faucets that do not use washers

Single-control faucets vary in construction and operation. Repair may require simply replacing a portion of the faucet.

Take off the cover cap and figure out how to get the faucet out. There may be a disc with ridges that can be unscrewed by holding a screwdriver against a ridge and tapping with a hammer. Disassemble the faucet, noting how the parts go together and how they work. Hard water may have caused scale corrosion or deposit on a moving part and impair its operation. Clean with fine steel wool or crocus cloth (do not use sandpaper, emery cloth, or harsh abrasives). Any precision parts showing excessive wear, scratches, or peeling of the plating should be replaced. The faucet can be taken to a plumbing shop carrying that brand.

Some special-design faucets come equipped with screens to remove pipe scale and sand when water is supplied by a well. Failure of the screens causes abrasive wear on moving parts of the faucet. Always replace broken or deteriorated screens when repairing this type of faucet.

Leak under the sink or lavatory

A metal grommet or compression ring usually does not leak, but if trouble develops it cannot be replaced. The tube must be long enough to cut off along with the attached grommet and expose sufficient length of tubing for use of a new grommet.

The drain trap is not made of as durable metal as the drainpipes, and a hairline split may be the cause of a leak. If so, the drain trap must be replaced.

A rubber grommet may begin to leak after years of service and can easily be replaced. A brass anti-friction washer is used between the compression nut and the rubber grommet, and this washer *must* be replaced or the repair job will be a failure.

Toilet (Water Closet) Problems

Water runs out of overflow pipe

A leaky or waterlogged float ball may be the problem. Remove the float ball from the end of the rod and drain out the water. If made of copper, the float ball can be soldered to close the leak. A new float ball may be needed.

The problem may be a bent float ball rod, or the screw that adjust the rod may need resetting. If the rod is bent downward to stop the water running, be careful to maintain the proper water level (do not bend the rod too far downward).

If a faulty inlet valve is the cause, the inlet valve assembly will need to be replaced.

Water runs through closet

The cause may be improper seating of the rubber ball. Be sure the lift rod, wire, and chain are straight and working freely.

If the water lever is below the top of the overflow pipe, then the trouble is a faulty rubber ball. Replace with a new ball.

Modified repair parts

Some systems are so designed that modification parts can be installed without special tools or experience. In order to buy a part that will fit properly, it is necessary to know the manufacturer and model to be repaired. Measure the parts to be replaced, and also measure depth of tank. (Tall and short parts are available.) Draw a diagram of the installation. Parts that may be modified include the valve that lets the water in, the trip valve that operates the flushing, and the ball float.

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