Kitchen Faucets - Chapter 1

Faucet Fiasco
You’ve probably seen more than one TV sitcom scene with the proverbial comedy and craze of someone trying to repair a kitchen faucet. But it’s no laughing matter when suddenly it’s your kitchen faucet that needs fixing. The plumbing and drain experts at Master Plumbing & Leak Detection recommend the following “first” and “next” steps. Then you’ll find a comprehensive listing of how to repair a variety of faucet types, plus a few tips on sink spray diverters.

First Step – Getting Your Faucet’s ID
The first step in fixing a leaking or sluggish faucet is identifying which of the two basic types of faucets you’re dealing with:

- **Compression faucet:** Older design with two handles and one spout.
- **Washerless faucet:** More recent design, usually with a single lever or knob that controls the flow and mix of hot and cold water by aligning interior openings with the water inlets. These faucets may be one of the several types: disc, valve, ball, or cartridge.

Because models vary with each manufacturer, it’s important to get identical replacement parts.

Next Steps
Let’s start with the absolute most important tip of all: Before doing any work on your kitchen faucet, turn off the water at the fixture shutoff valves or at the main shutoff valve and open the faucet to drain the pipes. And here are a few more steps you’ll be glad you took:

- When you’re taking the faucet apart, douse stubborn connections with penetrating oil before trying to loosen them with a wrench. Tape-wrap the wrench’s jaws to prevent scratching any visible parts of the fixture.
- Before starting any faucet repair, plug the sink so small parts can’t fall down the drain.
- Line the sink with a towel to prevent damage from tools or parts accidentally dropping.
- As you disassemble the faucet, line up the pieces in the order that you remove them so you can put them back together properly.

And again, please remember if you don’t want to star in your own situation comedy at home do turn off the water at the fixture shutoff valves or at the main shutoff valve and open the faucet to drain the pipes.

Leaking Compression Faucets
If your faucet has separate hot and cold water handles, it’s probably a compression faucet (also called a stem or washer faucet). In this faucet, a rubber seat washer is secured to the stem, which has very coarse threads on the outside. When you turn the handle to shut off the faucet, the steam is screwed down, compressing the washer against the valve seat in the faucet body. The stem is secured by a packing nut, which compresses the packing (twine, a washer, or an O-ring) and prevents water from leaking around the stem.

- If water leaks around the handle, tighten the packing nut. If that fails, replace the packing.
- If the faucet leaks from the spout, either a washer is defective or a valve seat is badly corroded.
- To find out which side needs work, turn off the shutoff valves one at a time; the leak will stop when one or the other is turned off.
- Take off the handle, remove the stem, and either replace the washer or replace or recondition the valve seat.
**Taking the faucet apart**

1. With the handle removed, lift off the steam and packing nuts by turning the nuts counterclockwise with an adjustable-end wrench or a pair of rib-join pliers. Be careful not to strip the nuts.
2. Unscrew the stem, lifting it straight out of the faucet body.
3. Examine the threads.
4. If they’re damaged or worn, replace the stem; if not, checking the packing for wear.

**Replacing the packing and washer**

- To replace the worn packing, either remove the O-ring packing washer and slide on an exact duplicate, or scrape off the twine and wrap new twine clockwise around the stem.
- To replace a cracked or worn seat washer, remove the screw and washer; install a duplicate washer. If the threads are too worn to hold a screw, snap in a swivel washer.

**Working on the valve seat**

- To replace a removable valve seat that’s pitted or corroded, insert a seat wrench into the valve seat and turn it counterclockwise until the seat lifts out. The new valve seat should be an exact duplicate. Coat the threads of the new seat with pipe join compound before installing it.
- To recondition a non-removable valve seat, grind down its burrs with a seat dresser (an inexpensive tool you can buy from a plumbing supply dealer). Insert and turn clockwise once or twice until the seat is smooth; remove metal fillings with a damp cloth.

**Cleaning your faucet aerator**

If the flow from your faucet is sluggish, the trouble may be in the faucet aerator. This device, at the tip of most faucet spouts, mixes air and water for smooth flow. But minerals or dirt particles in the water often build up on the screen and disc, blocking the flow. If mineral deposits are to blame or if aerator parts are damaged, it’s best to replace the aerator. If dirt is the problem, follow these steps:

1. Unscrew the aerator from the end of the spout.
2. To loosen stubborn connections, douse them with penetrating oil.
3. Disassemble and set the parts aside in order. Clean the screen and disc with a brush and soapy water.
4. Use a pin or toothpick to open any clogged holes in the disc.
5. Flush all the parts with water before putting them back together.

**Leaking Valve Faucets**

A valve faucet has a valve assembly on each side (one for hot water, one for cold) through which water flows up and out the spout. Moving the handle from side to side controls the mix, moving forward and backward controls the flow.

- The main problems you may encounter with a valve faucet are spout leaks, loose handle assemblies, and sluggish flow.
- A leak at the base of the spout may be due to a faulty spout O-ring.
- If the spout drips, you may need to replace on or more of the valve assembly parts.
- If the handle is loose, a simple adjustment to the handle screw or cam assembly at the back of the faucet can remedy it.
- If sluggish flow is the problem, the strainers or aerator may be clogged with sediment and need cleaning.

**Leaking Ball Faucets**

In a ball faucet, water flows when openings in the rotating ball align with hot and cold-water inlets in the faucet body.

- If water leaks from under the handle, leave the water on and tighten the adjusting ring.
- If the leak persists, turn off the water and replace the cam.
- For a dripping spout, replace the inlet seals and springs or the ball.
- Cure any leaks around the spout sleeve by replacing the O-rings on the faucet body.
Leaking Cartridge Faucets
A cartridge faucet has a series of holes in the stem-and-cartridge assembly that align to control the mix and flow of water. Usually, leaks occur because of worn O-rings or a faulty cartridge.

- Look at the O-rings on the faucet body. If they're in good shape, remove the cartridge (look under the spout sleeve on the outside of the faucet for the retainer clip that holds the cartridge in place).
- If the cartridge is worn, replace it with a duplicate.
- Cartridges vary, so read the manufacturer’s instructions before Installing a new one. The most common type has a flat side that must face front. Otherwise, the hot and cold water supply will be reversed.
- Be sure to fit the retainer clip snugly into its slot.

Sink Spray Diverters
A kitchen sink spray has a spray head attached to a hose, which is connected to a diverter valve in the faucet body. When you squeeze the spray head handle, the diverter valve reroutes water from the faucet to the spray head hose.

- If the flow is sluggish, make sure the hose isn’t kinked.
- Clean the aerator in the spray nozzle.
- Continued sluggishness may indicate diverter valve problems.
- Clean the valve or replace it.
- If the spray head leaks, remove it from the hose and replace the washer.
- For a leak at the faucet end of the hose, tighten the hose coupling.
- If the hose itself leaks, it’s probably cracked. Replace it.

Moen faucet repair?
Moen faucets have cartridges that can be replaced. There is a clip (on top) that has to be pulled up and out before the cartridge can be replaced. Often it seems stuck as if it will not come out. Some replacement cartridges provide a plastic square to turn the cartridge in the valve body 1/4 turn. This breaks it free from the valve grease that it is stuck in. If, after replacing the unit, the hot and cold are reversed, re-install with the cartridge turned 180 degrees.

Delta faucet repair?
You can buy a Delta single handle faucet repair kit with a tool for maybe five to seven bucks. It has all the instructions and is very easy to do.

The faucet "clunks" when I turn it on...
99% of the time when you hear a clunk in any pipe when you turn a faucet on/off - it’s a loose washer in the faucet. When you take it apart is sure you get the old washer and a screw. If you don’t - turn the water back on and flush out the missing part.

Bathroom faucet drips when the toilet is flushed or shower is on...
Could be a loose washer. The pressure holds it down when no other faucet is running water and the lower pressure let’s it rise up a bit when other water is used.

Claw foot tub faucets?
These faucets are special to CFTs they have 2 3/8”; centers. Some units have 1/2”; and some have 3/4”; water connections at the back. The 3/4”; needs special CFT supply pipes. Older faucets are not code and it is still easy to buy non-code faucets. The code is that the faucet spout must have a gap of at least 1”; between the top of the tub rim and the bottom of the spout - that's so bath water in the tub cannot siphon back into the drinking water supply.

Still have questions? Schedule an appointment with Master Plumbing and Leak Detection.