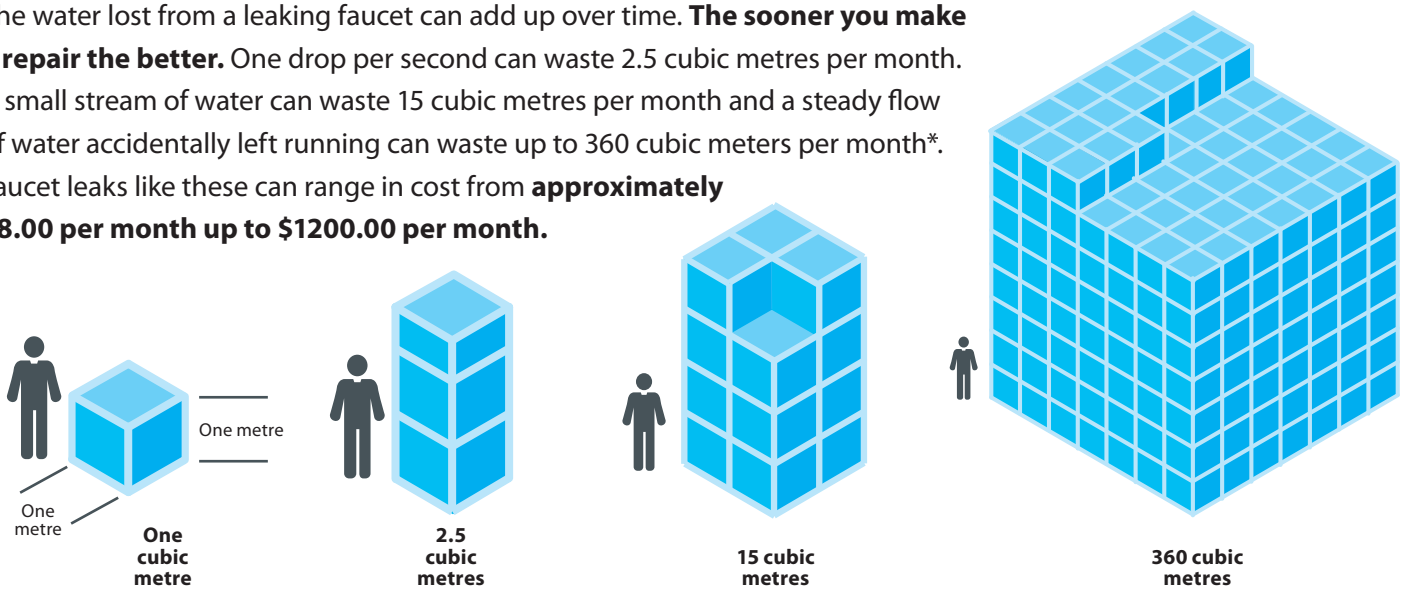
Homeowner Water Guide
Faucet Leaks and Repair

The water lost from a leaking faucet can add up over time. **The sooner you make a repair the better.** One drop per second can waste 2.5 cubic metres per month. A small stream of water can waste 15 cubic metres per month and a steady flow of water accidentally left running can waste up to 360 cubic meters per month*. Faucet leaks like these can range in cost from **approximately $8.00 per month up to $1200.00 per month.**



Did you know?

All home and commercial construction and renovation projects that require a plumbing permit are **required to install low water use fixtures as per the Water Utility Bylaw.** This bylaw requires showerheads to use no greater than 9. 5 litres (2.5 gallons) per minute and faucets to use no greater than 8.3 litres (2.2 gallons) per minute.

Some helpful tips:

- Always shut off the water supply and open all your taps to drain them before starting any repairs.
- Put in the drain plug or put a towel in the bottom of the sink so you don't lose any parts down the drain.
- If taking the faucet apart, lay out parts in the order you took them off to make reassembly easier.
- Take parts with you to the store to get the correct replacement
- If you find the valve is highly corroded, replace the entire stem or faucet (see faucet graphics on following pages for more details).
- Clean corrosion and mineral buildup from valve seats, valve stems, springs, seals, discs, and filter cones with a scour pad, vinegar, or brush as you go as. Calcium or mineral build-up can be a contributing factor to leaks, as these deposits may cause parts to not fit together properly.

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The culprit for aerator leaks is usually a small **washer inside the aerator** that is quick, easy and inexpensive to replace.

Finding and Repairing Faucet Leaks

Leaks from faucets are usually caused by either drips from the faucet head or leaks from the handle or base. The key to repairing faucets is to find and replace the rubber washers, seals and o-rings, as these components tend to wear out or corrode over time.

Replacing the Aerator

Aerators are small screens that screw onto taps and reduce the water flow by increasing the amount of air in the spray pattern. **A low flow aerator can cost as little as $4.00** and reduces water flow to 5.7 litres per minute.

Replacing an aerator washer is quick, easy and inexpensive.

- ☐ Unscrew your aerator from your faucet.
- ☐ If there is calcium or mineral build up on the aerator, soaking it in vinegar should help loosen things up to make removal easier.
- ☐ Take your old washer with you to the hardware store to buy the correct replacement, or easier yet, for a few dollars more, buy a whole new aerator.

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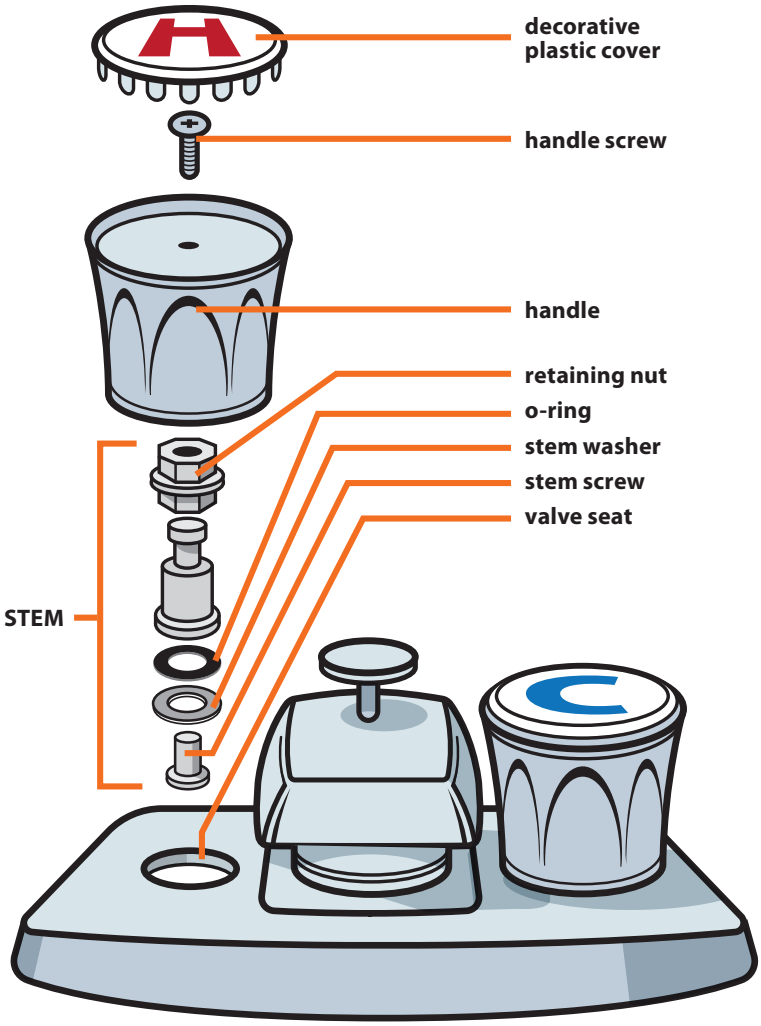
Washer-type Compression Faucet Repairs

This type of faucet has **separate handles for hot and cold water.** Rubber components inside the stem of the faucet can wear down over time and lead to leaks. Replace both sides, even if only one side is leaking now, as the other will most likely cause leaks in the near future.



- ☐ Remove decorative cover by slipping a flat blade screwdriver under it.
- ☐ Unscrew the handle screw and lift or pry the handle off the stem. This may be a bit challenging as the naturally high mineral content in Calgary's water can corrode the stem.
- ☐ Fit an adjustable wrench snugly around the large hexagonal retaining nut and loosen it by turning counter-clockwise. Finish unscrewing it with your fingers until the whole stem lifts out of the faucet.
- ☐ On the bottom of the stem you will see a rubber washer held in place by a screw. Unscrew it and replace the washer with a new one of the same size.
- ☐ Be careful to not over tighten the screw or deform the washer when you reassemble.
- ☐ Examine the o-ring on the stem. If it's broken or worn, you will need to replace it.
- ☐ Slide a screwdriver blade beneath the O-ring and roll the O-ring off the stem to remove.
- ☐ Make sure you get a new o-ring that is the same size as the old one.
- ☐ Roll the new O-ring onto the stem and valve seat. The new O-ring should fit in the groove where the old one was.
- ☐ Before putting the stem back in place, clean the valve seat and stem, and rub petroleum jelly or plumbers grease on the threads of the stem.

Helpful Tip: Before prying off the faucet handle, cover the end of your screw-driver with tape or cloth to prevent scratching the faucet finish.

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Washerless Faucet Repairs

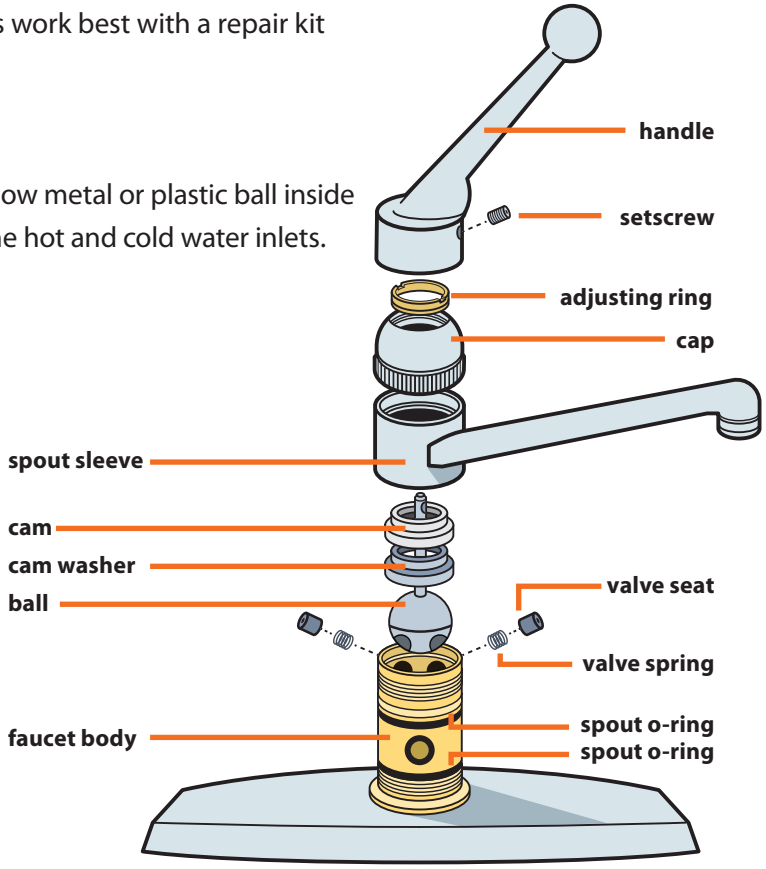
This type of faucet can be a single lever or two handles and comes in four basic types (disc, valve, cartridge and ball-and-cam). Repairs work best with a repair kit designed for your particular model.

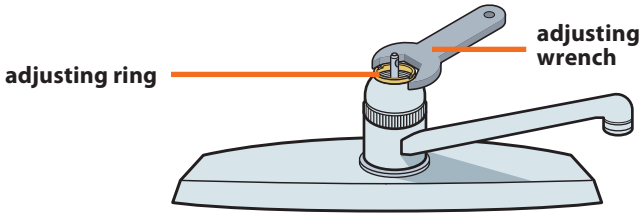
Ball and Cam Faucets

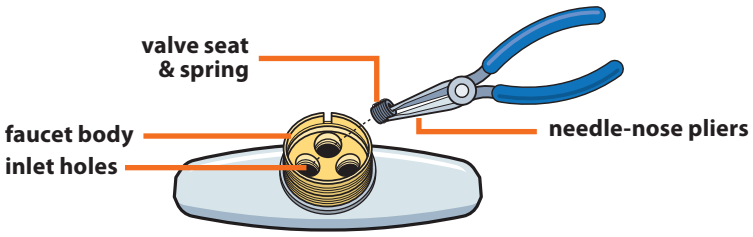
Ball faucets have a free moving lever attached to a hollow metal or plastic ball inside the body of the faucet. This ball rotates to align with the hot and cold water inlets.

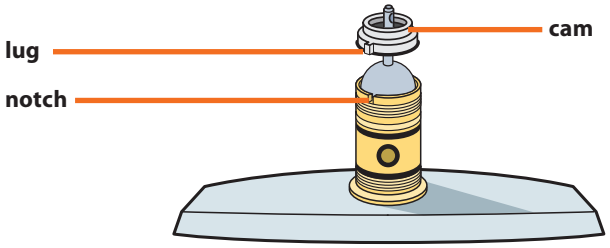
> **Helpful Tip:** It is important that you replace this ball in the same position as you found it as this will ensure you do not switch the hot and cold direction of the lever.

- ☐ Remove the handle. Push the single lever to the side to find the setscrew. There may be a decorative cover in the hole. Remove by slipping a flat blade screwdriver under it.
- ☐ You will need the right size of Allen key to remove the setscrew. Unscrew the screw and pull or pry the handle off the stem.
- ☐ Leaky base? Replace the o-rings on the faucet body.
- ☐ Leaky handle? Tighten the adjusting ring using an adjusting ring wrench and/or replace the cam washer that sits above the ball.
- ☐ If the ball is corroded, replace it.
- ☐ Leaky spout? The valve seats or springs are worn out. To access the valve seats and springs, you'll need to remove the cam, cam washer and ball.
- ☐ Use long-nose pliers or a pencil to lift out the old valve seats and springs and replace them with new ones.
- ☐ When reassembling, be sure to align the cam lug with notch on faucet body.









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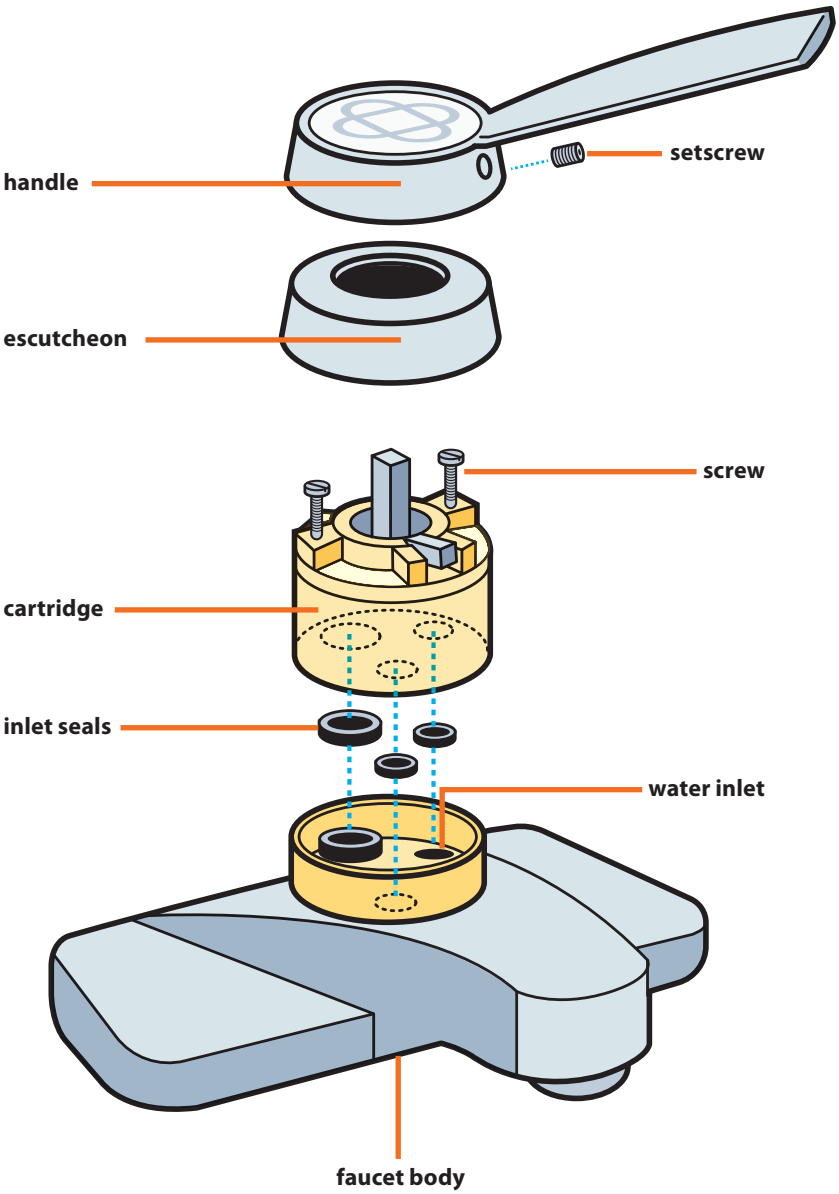
Single Handle Disk Faucet

The core component to this type of faucet is a ceramic disc inside a cartridge assembly and can be single or dual handle type. Leaks occur when the seals become corroded or worn out. On a single handle faucet, three seals control cold, hot and mixed water flow.



- ☐ Remove the handle. Push the single lever to the side to find the setscrew. There may be a decorative cover in the hole. Remove by slipping a flat blade screwdriver under it.
- ☐ You will need the right size of Allen key to remove the setscrew. Unscrew the screw and pull or pry the handle off the stem
- ☐ Loosen the two screws that tighten the cartridge to the faucet body. (Note: It might be a retaining nut instead of screws, if so use a pair of pliers or adjustable wrench to unscrew.)
- ☐ Remove all three neoprene inlet seals that are located under the cartridge.
- ☐ Clean the cartridge and the water inlet/ outlet holes, then install new seals.
- ☐ When reassembling, be sure to align the three inlet holes in the disk cartridge with the water inlet on the body.
- ☐ If the faucet continues to leak, replace the cartridge that contains the ceramic discs by purchasing a replacement kit and following the instructions in the kit.

(**NOTE:** Older models of disc-type faucets may be held together from under the countertop. If you have difficulty removing the handle using the instructions above, then look for two screws under the counter. Loosen these and the cover and handle should come off.)

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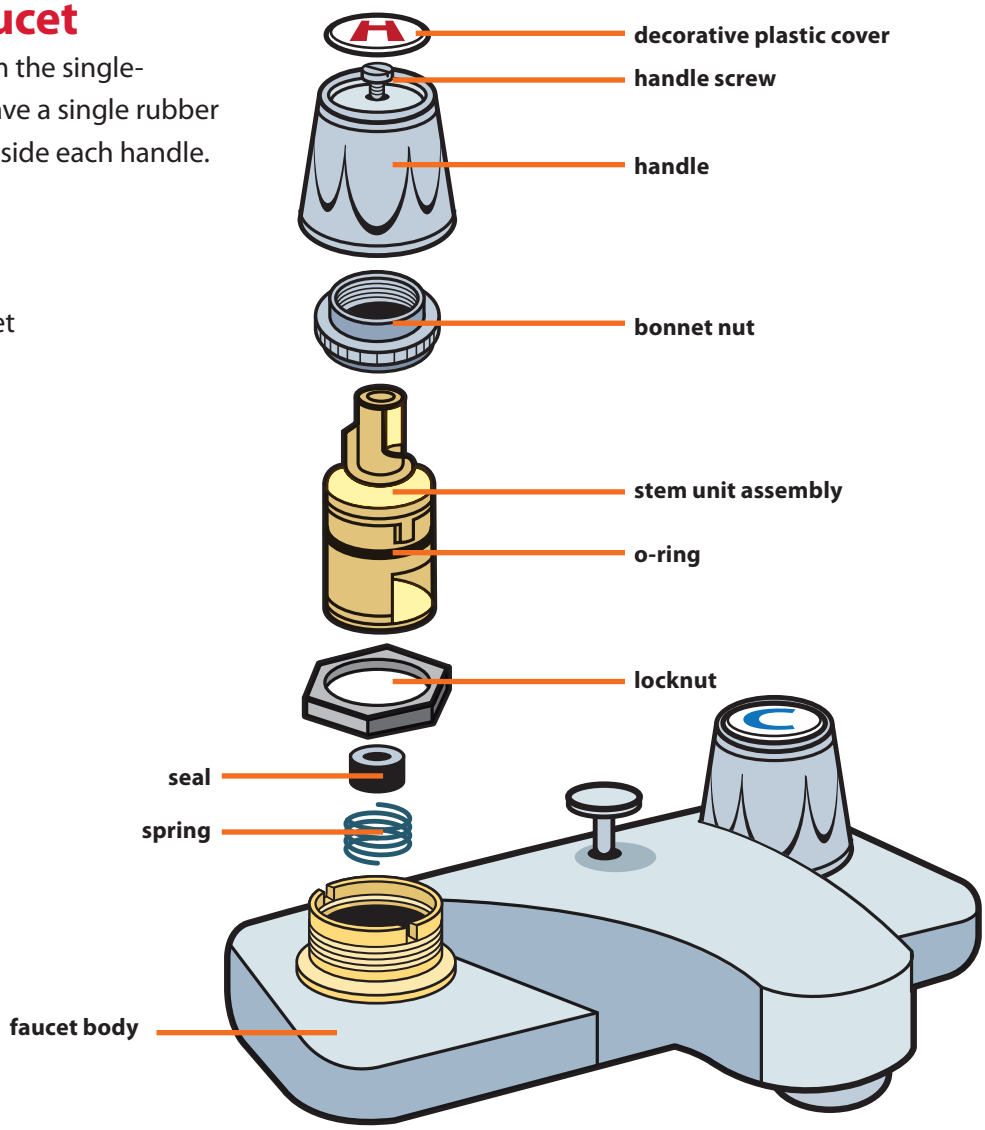
Two Handle Disc Faucet

Two-handle disc faucets differ from the single-handle disc faucets in that most have a single rubber or plastic seal and a small spring inside each handle.

- ☐ Take it apart using the same method described for the washer-type/compression faucet on page three. Remove the decorative plastic cover, handle screw, and handle.
- ☐ Remove the bonnet nut that secures the stem unit assembly by using an adjustable wrench or pliers.
- ☐ Leaky handle? Replace the stem o-rings or the entire stem unit assembly if it looks worn or corroded.
- ☐ Leaky spout? Replace the seal and spring. Remove carefully with long-nose pliers.



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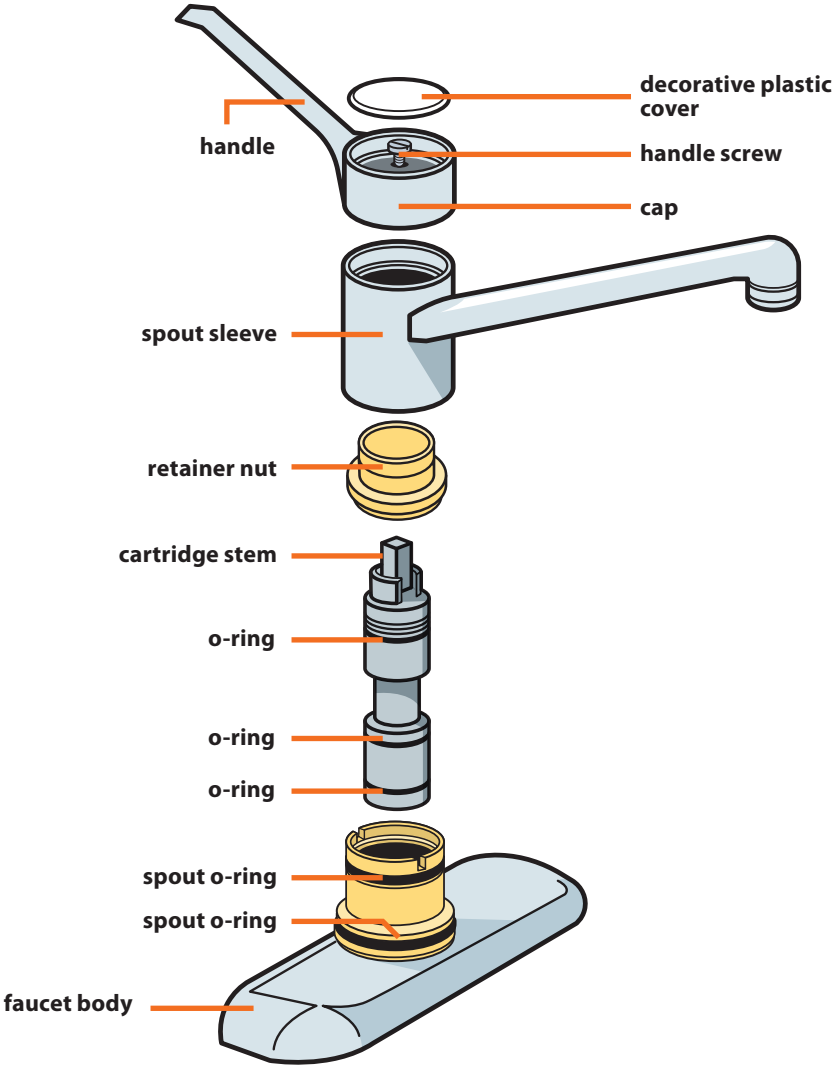
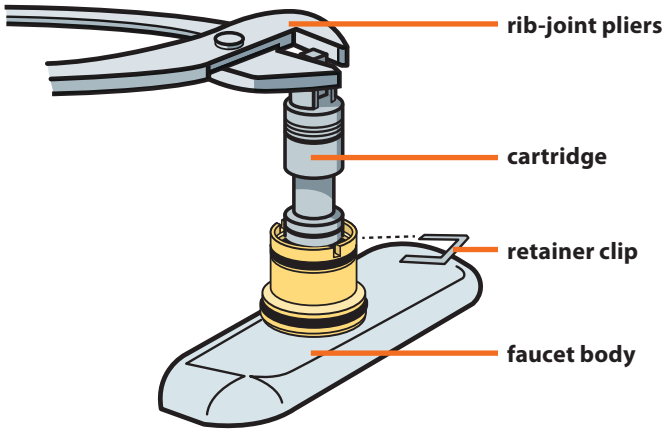
Cartridge-type Faucets

Cartridge faucets have a narrow metal or plastic cartridge that sits inside the faucet body. Leaks on this faucet usually occur when the o-ring or assembly become worn.





- ☐ Take it apart using the same method described for the washer-type/compression faucet on Page three. Remove decorative plastic cover, handle screw, handle and spout sleeve.
- ☐ Unscrew the retainer nut with pliers.
- ☐ Use a screwdriver or long-nose pliers to remove the retainer clip from its slot. You will find this clip just under the rim of the faucet body. Take note of the retainer clip placement for successful reassembly.
- ☐ Grip the cartridge stem with pliers and remove it by twisting and lifting stem from the faucet body. If pliers do not work, a special cartridge removal tool is available at hardware stores and may be necessary.

(Note: The hot and cold water are easily reversed; pay special attention to which way the cartridge stem's flat side faces.)

- ☐ Replace the o-rings on the cartridge if they show wear.
- ☐ Apply plumber's grease or petroleum jelly to the new o-rings before installation.
- ☐ Insert the retainer clip the way you found it and complete reassembly.

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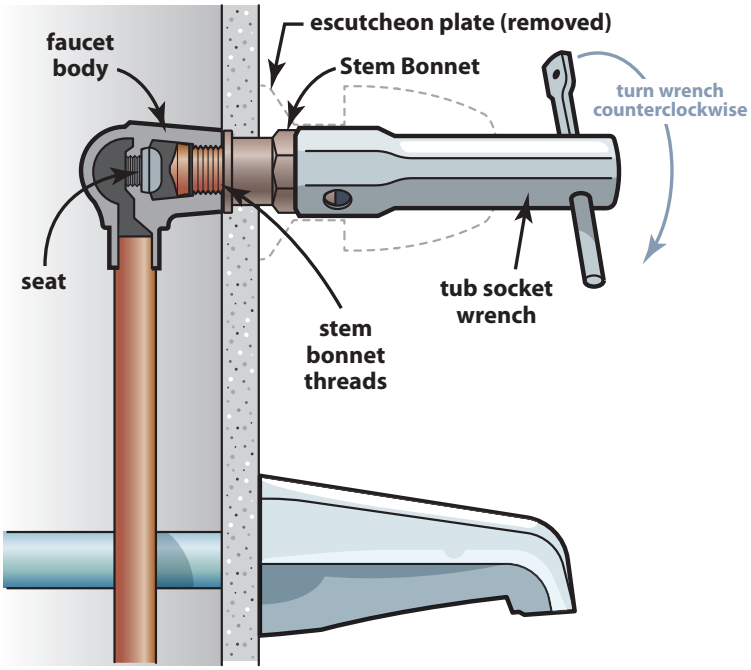

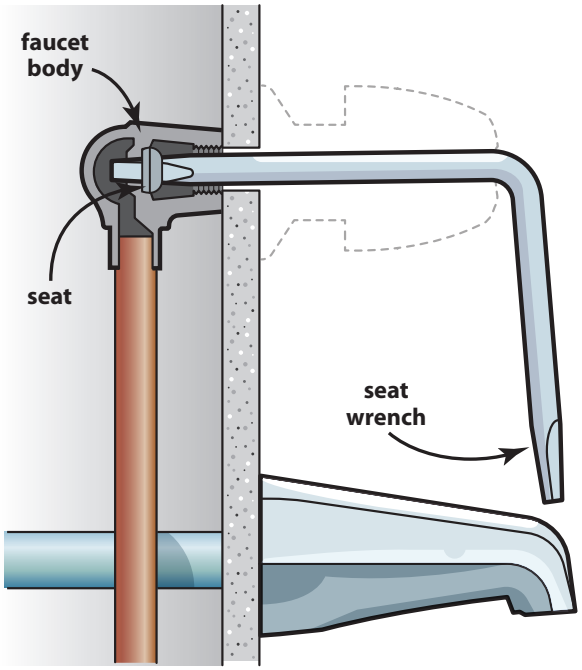

Tub and Shower Faucets

Leaks from a bathtub faucet can go unnoticed for a long time, since tubs and showers tend to be used often and are wet a lot of the time. Bathtub faucets are similar to sink faucets, but most of the faucet is behind the wall. The cause for leaks in this type of faucet are usually worn out washers, seals or gaskets in the valve assembly.

A few considerations before beginning your repair:

- ☐ Usually tubs and showers do not have shut-off valves, so you will need to turn the water off at the main house valve before making repairs.
- ☐ Turn handles to the "on" position to drain any water in the faucet pipes.

Helpful Tip: Cover the end of your screwdriver with tape or cloth to prevent scratching.

To repair:

- ☐ Remove decorative cover (on the faucet handle that covers the screw) by slipping a flat blade screwdriver under it.
- ☐ Unscrew the screw and lift or pry the handle off the stem. This may be a bit challenging as the naturally high mineral content in Calgary's water can corrode the stem. Do not force it, as it could break. (**Note:** If it is really stuck, you may need to get a handle puller from the store. Follow the included instructions included with the handle puller to remove the handle.)
- ☐ Pull off or unscrew the escutcheon plate that sits flush against the wall.
- ☐ Use a tub socket wrench on the stem bonnet and turn counterclockwise to remove the stem.
- ☐ Use a seat wrench to remove the seat.
- ☐ Replace the seat washer or if the whole seat looks worn, replace the whole seat assembly.

This information is provided for your benefit. **If you do not feel comfortable making these adjustments please hire a plumber.** The City of Calgary will **not** be responsible for any damage because of faulty repairs.

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