

U- Fix It Workshop

To Repair or Replace?

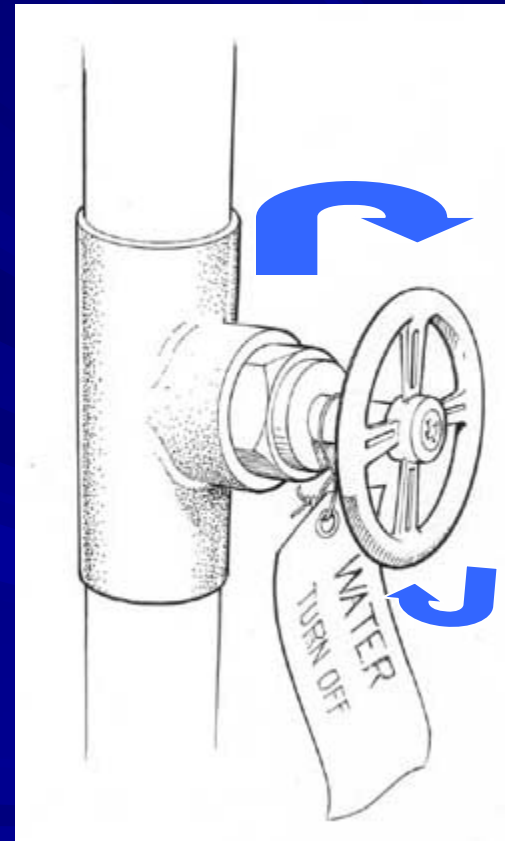
- How old are the fixtures you are repairing?
- Will cost or risk of repair outweigh the cost of replacing the fixture/appliance?
- New water saving fixtures may be best

Pressure Reducing Valves

- Regulator reduces the water pressure from the public main to a house
- Use a pressure gauge to see if they are working
- Pressure regulators can be adjusted and repaired
- Most homeowners can have their pressure set at 50-60 pounds per square inch (psi)
- Average pressure coming into a home without the reducer- 100-120 (psi)
- Call a plumber

Repairing Leaks

- Always turn off water before attempting any plumbing repairs



General Tips to Get Started

- Have the necessary tools and washers that fit your faucets at home
- Take old parts with you to find an exact match
- Find out your toilet make and model by looking at inside of toilet or on lid
- Carefully remove top of toilet tank

Toilets

Fixing Toilets

Refill valves



Float (ballcock)

Pilot valves

Flush valves



Typical

Pedestal type

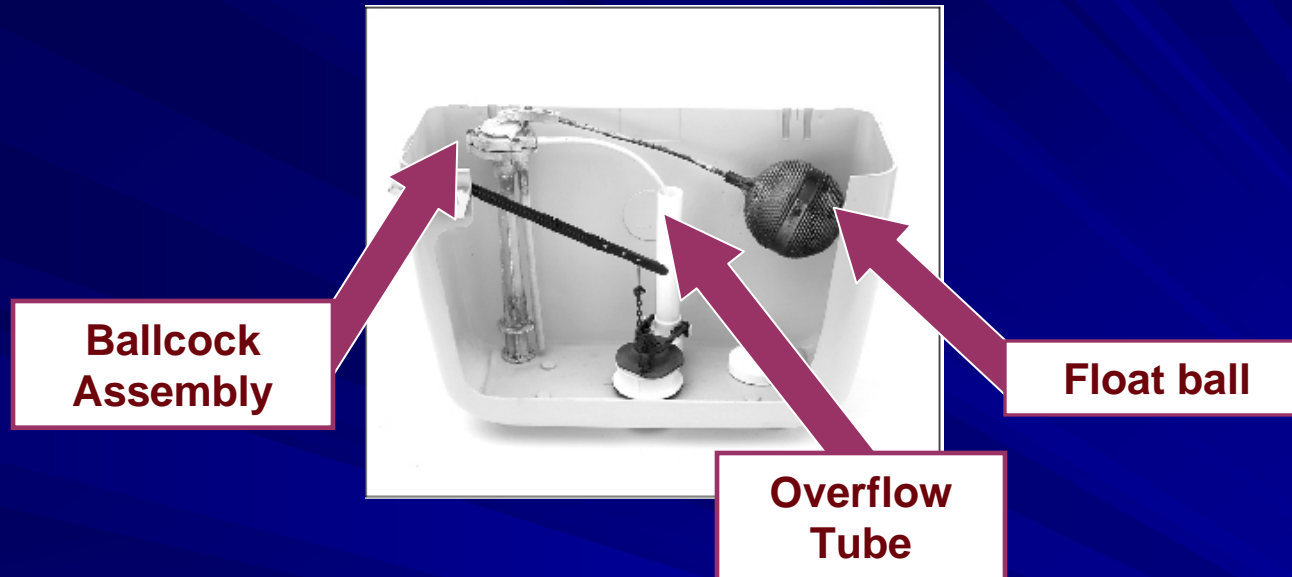
Plunger

There are two main parts of the toilet to repair:

- Refill Valves
- Flush Valves & Flappers

Refill Valve

Float Ball (Ballcock Assembly)



- If refill valve & float are not adjusted correctly the tank may fill continuously & flow out the overflow tube
- Level of water controlled by float ball
- Unscrew and replace leaky or waterlogged float ball
- Bent, rusted or corroded parts may need replacement
- Take to hardware store to get exact duplicate

Overflow Tube

- Prevent tank from overflowing
- Acts as a drain if the tank's water level rises too high.

Overflow Tube



Other Types of Refill Valves: Pilot Valves

- Follow manufacture's instruction for replacement and repairs



Flush valves

Flush valves



Typical



Plunger



Pedestal type

Repairing Plunger Ball Leaks



- Improperly seated plunger-ball (also called tank stopper) is a tremendous water-waster
- Consider replacing the whole refill valve
- Check with your hardware store to see if you can get the right one for your toilet

Flush Valves & Flappers

- Test for proper seating, replace if necessary
- With tank off, test-flush toilet to make sure connector chain from the handle to the flapper cannot get caught underneath the flapper
- Make sure your handle does not “hang up” after you flush
- If you jiggle the handle or push it back, up to stop the flow, it is time to repair

Replacing a Toilet

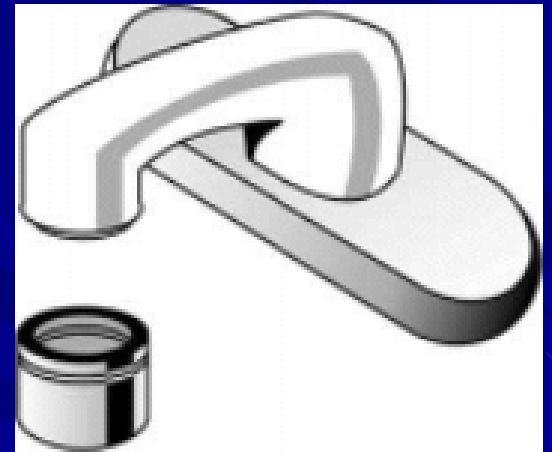
- Review toilet performance information
- Measure rough-in distance
- Locate a do-it-yourself website (or book)
- Or call a plumber



Faucets

Making Faucets More Efficient

- Aerators can be easily screwed into your existing faucets. Most kitchen & bathroom faucets have standard size outlets with threads inside.
- If an aerator exists, look for writing on its side telling the flow rate- GPM (gallons per minute).
- A faucet is considered to be "low-flow" if it's rated at 2.0 GPM or lower.
- If your faucet has no aerator, or its aerator is rated at more than 2.0 GPM, replace it with a low-flow version.



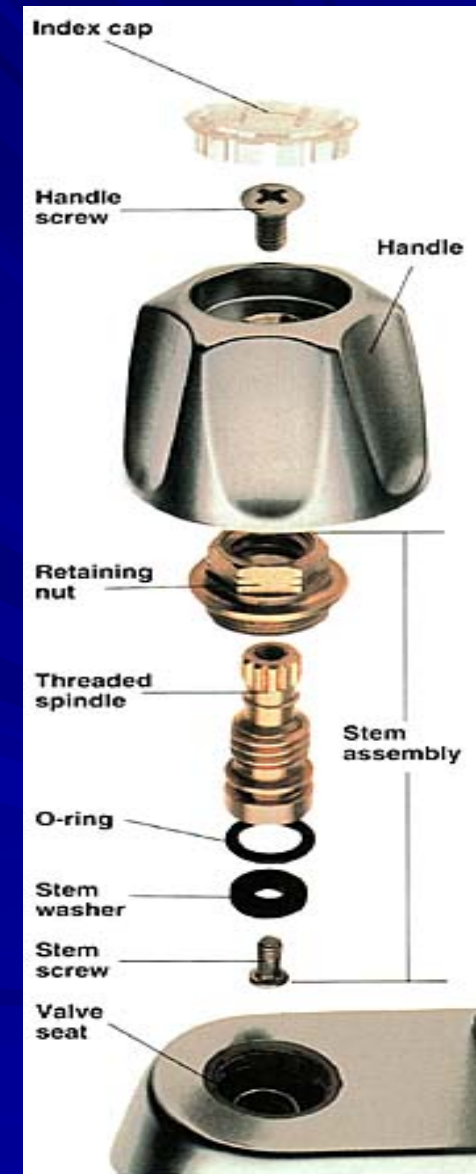
Source: Lowes.com

How to install an aerator

- Unscrew the old aerator.
- Remove using your bare hands, wrench or pliers.
- Run water through the faucet to make sure it has no leaks.
- Screw in new aerator by hand
- Installing a kitchen faucet aerator can sometimes cause the faucet arm to leak where it connects to its base, so you may also need to tighten up this connection with a wrench.
- If your new aerator sprays out the side, unscrew it and screw it on again.

Fixing Compression Faucets

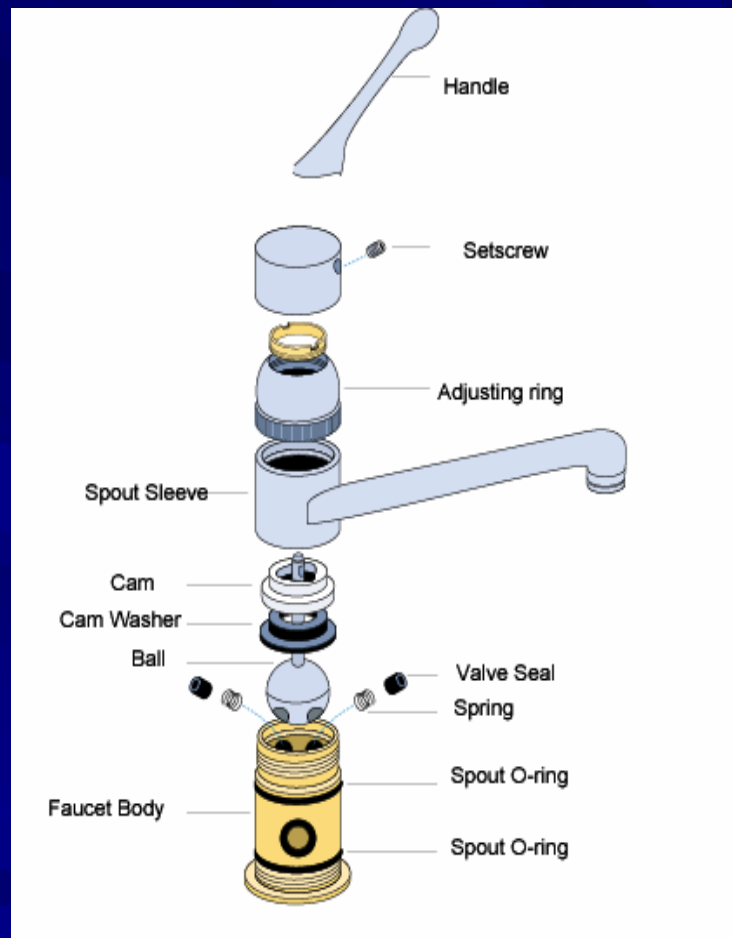
- Replacing washers on a compression faucet saves water
- Remove cap, handle screw, handle, packing nut or retaining nut and stem.
- Unscrew the faucet stem counterclockwise & pull out
- Take the washer to get exact size & shape replacement washer, and a new brass screw
- Carefully clean the valve seat with a soft cloth



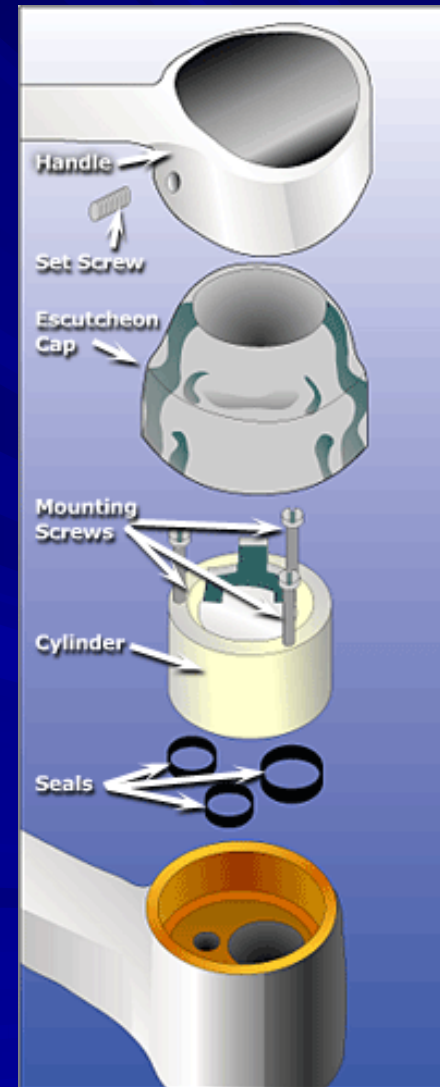
Non-Compression Faucets

- These faucets control the flow of water with one lever or knob.
- There are three kinds: cartridge, ball and ceramic disk
- Leaks may be repaired by taking the faucet apart and replacing the mechanism with a replacement cartridge/ rather than individual parts

Ball Non-compression Faucet



Ceramic Disk Non-Compression



Source: Lowes.com

Tub and Shower Faucets

- Tub and shower faucets can be either compression or non-compression type
- Most of the faucet is located behind the wall
- You will need a socket wrench to unscrew the large “bonnet” nut to remove the stem
- Repairs are similar, but remember tubs and showers do not have handy shut-off valve, turn of at the main house valve

Showerheads

Replacing Showerheads

If your showerhead uses 2.5 gpm, you could save water by replacing it with a water-saving showerhead.

- **1. Unscrew it and replace** (use an adaptor if a ball joint is not in place).
- **2. When installing the new showerhead** apply teflon tape or pipe joint compound to the exposed threads of the new neck to provide a leak proof connection if there is no washer
- **3. If the shower neck has been on for a few years** and the neck joint is too stiff to unscrew with moderate pressure, consider having a plumber replace it.

Others

Hot Water Heater

- If you notice a puddle of water around the tank, it probably has a leak due to corrosion- sign to replace tank.



- Call a plumber

Outdoor Spigots

- Turn off water at main valve
- Open spigot and allow water to drain
- Remove old spigot
- Clean pipe threads with brush
- Install new spigot & tighten by hand.
- Wrap the spigot with a towel to protect it and tighten fully using adjustable pliers.



Additional Resources

- Information on inefficient fixtures & repairs
 - www.h2ouse.org
 - www.diynetwork.com
 - www.acmehowto.com
 - www.toiletology.com
- New Ultra Low Flow Toilet Performance
 - www.northgeorgiawater.org/MaPFinalReport.pdf
 - www.savingwater.org(see FlushStar link)
 - www.ci.austin.tx.us/watercon/toiletrebatelist.htm (Austin, TX list)
- Toilet Flapper Information
 - www.toiletflapper.org
 - www.awwa.org/waterwiser/watch/Toilet-Flapper-Study-12-16.pdf