

Before repairing your toilet, you must determine which type of toilet you have.

Pressurized Toilets

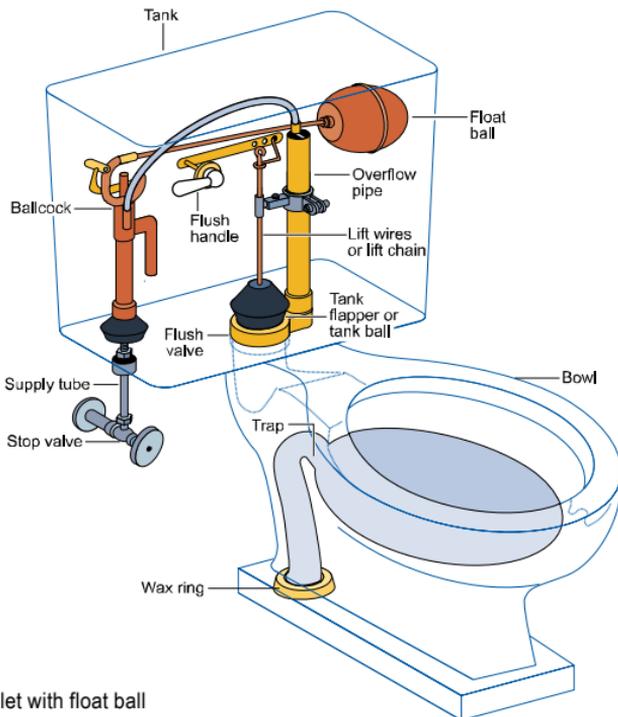


If you have a pressurized toilet, it is recommended that you call a licensed plumbing contractor to repair a leak. However, this type of toilet is known for its low maintenance, low water consumption and infrequent clogs.

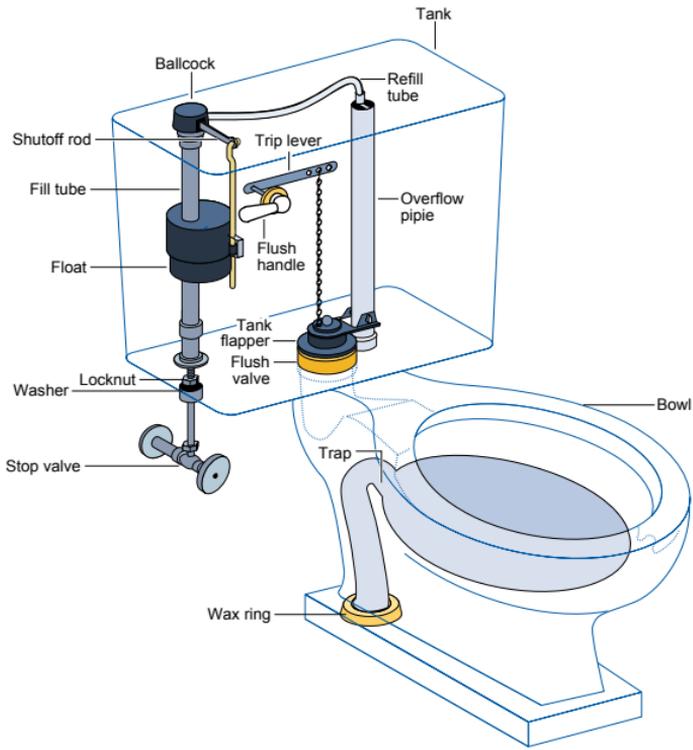
Pressurized toilet

Gravity Toilets

Your bathroom probably contains a conventional gravity toilet, which relies on the force of gravity to operate.



Gravity toilet with float ball



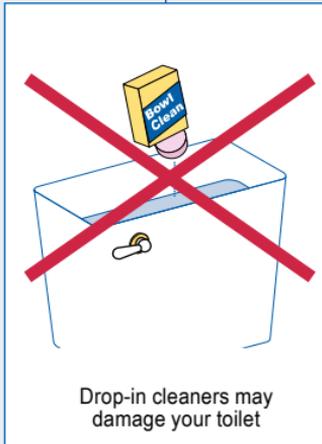
Gravity toilet without floatball

In a gravity toilet, leaks will develop as rubber and other surfaces wear, distort, or corrode.

Basic repairs include cleaning, restoring surfaces, replacing rubber parts and adjusting fits and alignments.

The use of some in-tank “drop-in” cleaners may cause damage to your toilet’s flapper valve. This

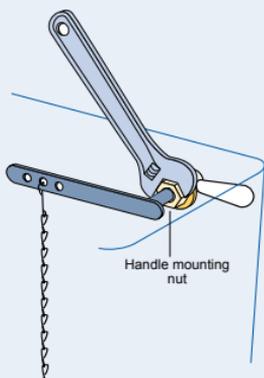
will make your toilet “run” when water leaks from the tank to the bowl. Prolonged use of these cleaners may cause your toilet to be less water efficient.



Drop-in cleaners may damage your toilet

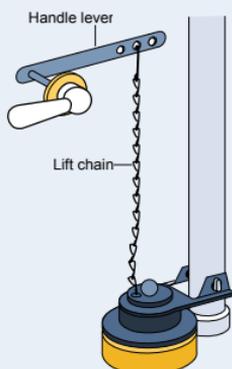
Fixing Lift-chain and Handle Problems

Adjusting toilet handle



If a toilet runs continuously, it could be caused by kinks in the lift chain or lime buildup on the handle-mounting nut. As a first step, clean and adjust toilet handle and lift chain. The mounting nut in the handle has reversed threads; loosen nut by turning clockwise. Scrub handle parts with a brush dipped in vinegar to remove lime buildup.

Adjusting lift chain

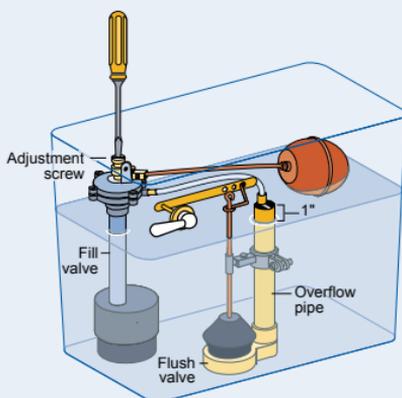


Adjust lift chain so it hangs straight from handle lever, with about one-half inch of slack. Hook the chain in a different hole in the handle lever or remove links with needlenose pliers to remove excess slack in the chain. If the lift chain is broken, replace it.

Correcting Tank Water Level

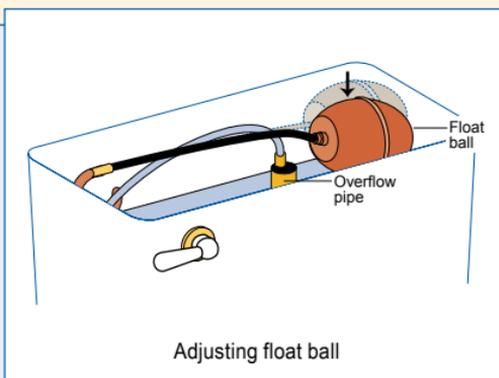
Next, check the surface of the water in the tank. The legal code requirement is that the water level remain at least one inch below the top of the overflow pipe. If the water level is correct, check to see if you have flapper valve leaks. (See Flapper Valve and Plunger Ball Leaks.) If the water level is not where it should be, watch to see if water is being wasted through the overflow pipe. If it is, you will have to adjust the water level of the tank. To adjust water level, check for adjustment screws on top of the fill valve (also known as the ballcock). If there is a screw in

the center of the fill valve, adjust it clockwise to decrease water level in the tank. Depress the flush lever to empty tank and wait for it to refill.



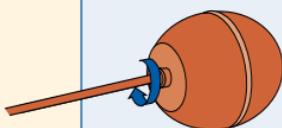
Adjusting water level

If the water level has not dropped, you can then bend the float rod. Gently bend the connecting rod attached to the



Some toilets have floatcup/ ballcock assemblies. These can be adjusted easily by gently

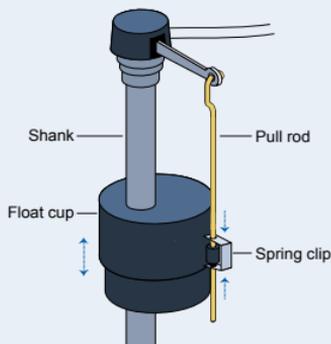
pinching the spring clip on the metal rod assembly and sliding the clip down to lower the water level of the tank. If this fails, the ballcock must be replaced. (See Troubleshooting Ballcock Leaks.)



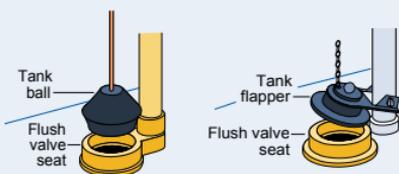
Unscrewing float ball

If adjusting the float ball doesn't help the problem, the ballcock assembly needs repairs or replacement seats. (See Replacing Ballcock Assembly.)

Adjusting floatcup/ballcock assembly



Flapper Valve and Plunger Ball Leaks

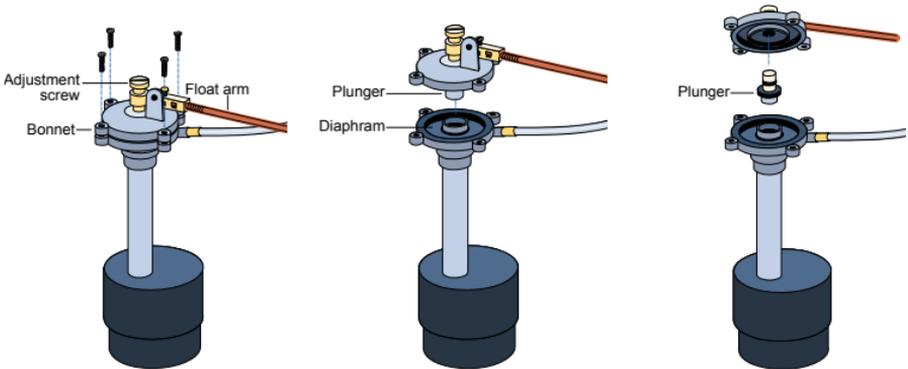


The plunger ball and the flapper valve perform the same functions although they are different mechanisms. However, these cannot be interchanged. The plunger ball should be replaced by a plunger ball and the flapper should be replaced with a flapper. Both flapper and plunger-ball leaks can cause toilets to run con-

stantly or intermittently. To check the flapper or plunger-ball or other flush stopper for leaks, use a long screwdriver or other thin object to apply pressure on the flapper. If water stops running upon depression of flapper, flapper must be changed. Also, check this seating surface (flush valve seat) and possibly resurface or replace it. If water does not stop running upon depression of flapper, the ballcock must be replaced or fixed. (See Troubleshooting Ballcock Leaks.)

Troubleshooting Ballcock Leaks

Checking diaphragm ballcock assembly



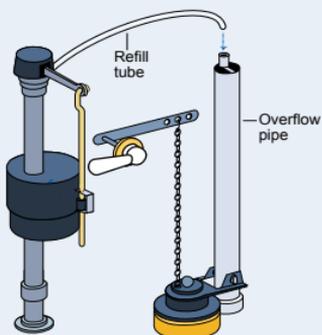
To check ballcock assembly, shut off water and remove the top of the bonnet, the ballcock and the plunger and inspect for debris and remove any that is obvious. Place a small cup over the remaining portion of the ballcock and turn water on for three to six seconds. This should blow out any debris loose in piping. Turn off water and before reassembly inspect diaphragm, plunger and

seating surfaces for deterioration, scars, nicks or scratches. Any part that has obvious scars will cause further leaking and should be replaced. You may try a temporary fix by smoothing these surfaces with emory cloth. Kits containing replaceable parts of the ballcock assembly are available at hardware and plumbing stores.

Replacing Ballcock Assembly

To replace ballcock assembly, empty the tank completely and using an adjustable wrench disconnect the supply pipe or hose located beneath the toilet tank. Remove the locknut and washer and lift out the ballcock assembly. You may want to take the whole unit to your plumbing supply store to assure a proper match. Screw the new unit into place, put the refill tube into the overflow pipe, and reattach the float ball. Refill the tank and check to make sure the water

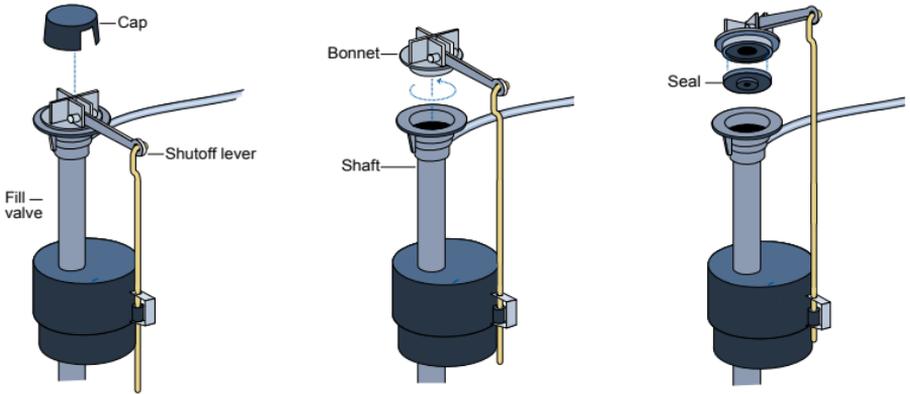
level is one inch below the level of the overflow pipe and that all parts are working smoothly.



Attaching refill tube to overflow pipe

Float-cup Ballcock

Checking floatcup ballcock assembly

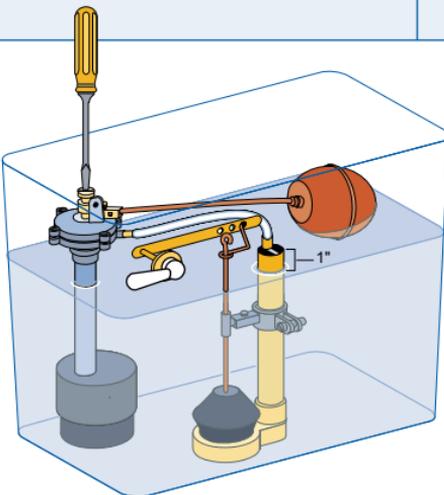


Shut off the water and flush the toilet. Pull off the cap. To remove the bonnet, lift the lever on the float rod mechanism. Push the mechanism down and twist counterclockwise until it comes free.

Clean out any debris. Replace the rubber seal located under the bonnet if it is defective. If the shaft or housing is cracked or worn, replace the entire ballcock.

If you are confident you have taken care of all the problems in your toilet, test for leaks again by using the dye tab/food coloring test.

New Toilet Water Level Adjustment



Adjusting water level

Even a newly installed toilet may have a leak. If it does not, you should still make sure your toilet is operating efficiently by checking to see that the water level is one inch below the overflow pipe (a code requirement). Many toilets have a waterline mark on the overflow pipe or on the back of the toilet tank to help you set the correct water level for your toilet's design. (See [Correcting Tank Water Level](#) for more information.)