

Identifying and Fixing Common Toilet Leaks

Toilet leaks can waste as much as four to five gallons of water per minute and cost you up to \$100.00 per month in increased water and wastewater bills. Toilet leaks occur in two ways and are often very difficult to detect.

First:

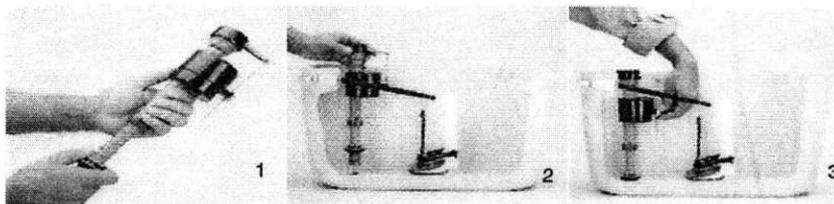
The most common toilet leak and often hardest to detect is caused by a deteriorated or defected flush valve (flapper) ball at the bottom of the toilet tank. If the flapper or ball valve does not seat properly and form a water tight seal, water will leak around it into the toilet bowl. **Often, this leak will occur without being heard.** To test for this type of leak, add a few drops of food color or place a colored dye tablet (available from many hardware stores or possibly your water utility) in the toilet after it has stopped filling.

An easy way to check for flush valve leaks:

In just minutes, you can find out if a toilet is wasting thousands of gallons due to an undiscovered water leak. Here's how:

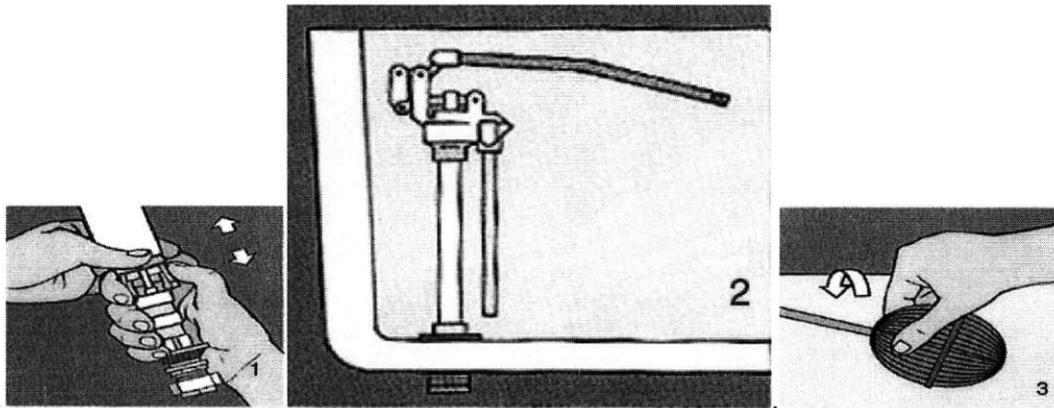
1. Remove the tank lid, then flush
2. After the flapper/tank ball drops and the tank refills, add several drops of dark food coloring) or a fluidmaster leak detector tablet).
3. Wait at least 20 minutes.
4. If any trace of color appears in the toilet bowl, there is a leak.

Solutions to fix flush valve leaks:



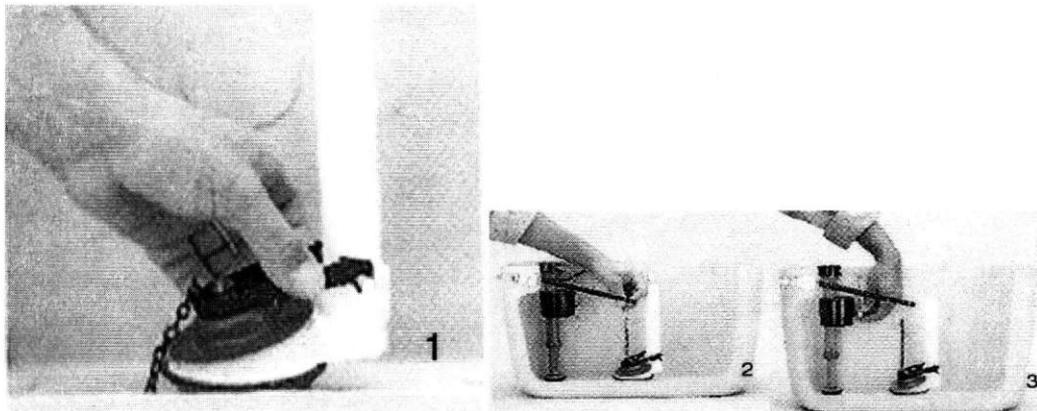
Replacing a Float Cup Fill Valve:

1. Adjust height by twisting shank in/out of valve body.
2. Position valve in tank.
3. Turn on water. Adjust water level.



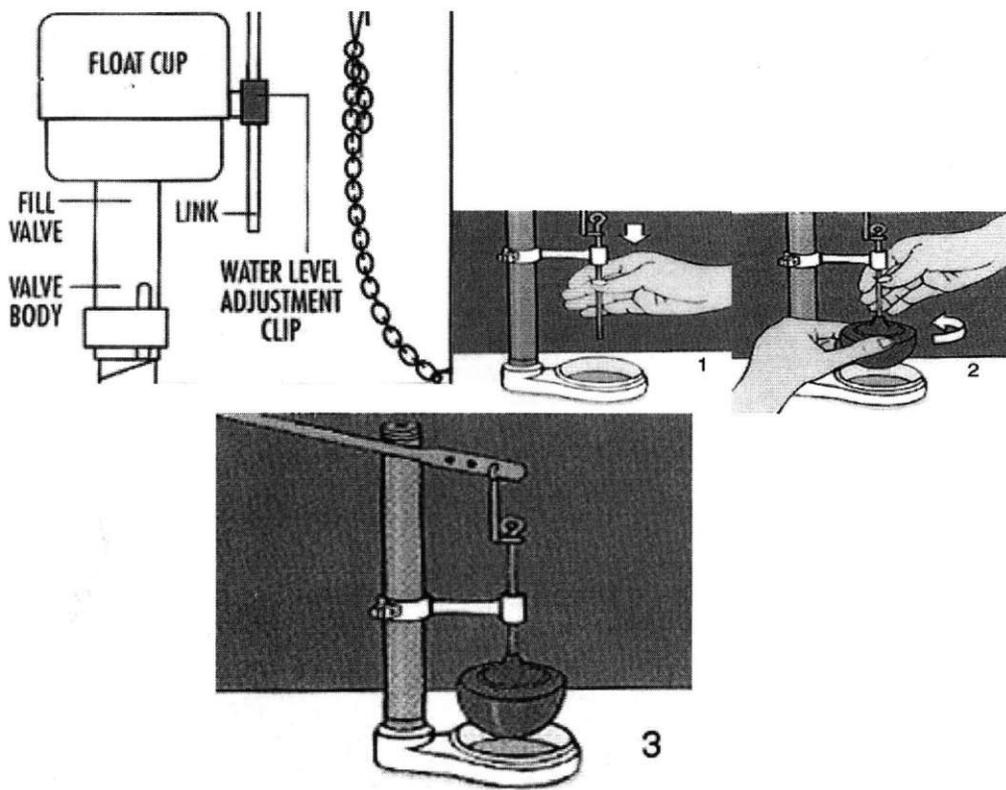
Replacing a Float Ball (Ballcock) Fill Valve

1. Check height and adjust if necessary
2. Place valve in tank inlet hole, making sure rod arm position allows proper movement of float ball.
3. Screw rod arm into valve arm; screw float ball onto rod arm. Turn on water supply.



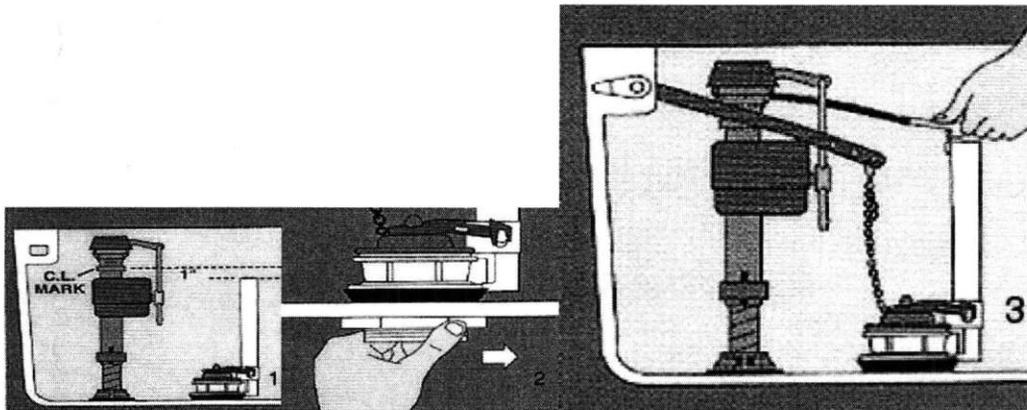
Replacing a Flapper:

1. Align flapper over mounting ears on flush valve. If needed, an adapter ring that includes mounting ears can be added at this point.
2. Connect chain to flush lever.
3. Turn on water. Check operation. Trim excess chain.



Replacing a Tank Ball:

1. Slide lower life wire through upper lift wire, then through guide arm on overflow pipe.
2. Thread tank ball onto lower lift wire.
3. Align tank ball over drain seat, keeping wire vertical. Check operation to be sure ball seats properly.



Replacing a Flush Valve:

1. Cut new overflow pipe to match height of old pipe.
2. Install valve by tightening lock nut ½ turn beyond hand tight. Slide gasket onto threaded end of valve.
3. Connect flapper chain to flush lever. Attach refill tube to overflow pipe. Reconnect tank to bowl.

Second:

The second most-common type of leak is caused by an improperly adjusted or broken fill (ball cock) valve. If the float is set too high or if the shut-off valve fails to close completely, water will continue to enter the tank and flow into the overflow tube. This type of leak can be seen simply by taking the tank top off and observing if water is flowing into the overflow tube once the tank is full.

The solution to this type of toilet problem is to reset the tank water to a lower level by using the fill valve's water level adjustment clip. If it is a Float Cup-type valve, squeeze the two sides of the metal clip together, then slide clip down the rod. In the case of a Float Ball-type valve, lower water level by bending float arm slightly downward.