

# TESTING FOR LEAKS



Leaking toilets are the most common cause of high water bills. "Nine out of ten complaints the Washington Suburban Sanitary Commission receives about high water bills can be traced to leaking toilets," according to the WSSC Public Affairs Office. People tend to repair drippy faucets because the drips are visible and annoying. Whereas, it's easier to overlook the leaking toilet. There are a number of signs that a toilet needs some repairs, but many toilets leak without conspicuous indications of trouble. Here are some of the obvious signs of a leaking toilet:

- If you have to jiggle the handle to make a toilet stop running.
- Any sounds coming from a toilet that is not being used are sure signs of leaks.
- If you have to hold the handle down to allow the tank to empty.
- If you see water running over the top of the overflow, you definitely have a leaking refill valve. If you are unsure whether or not water is running over the top of the overflow pipe, sprinkle talcum powder on top of the water in the tank, and you can clearly see whether or not it is.
- If you can see water trickling down the sides of the toilet bowl long after it's been flushed.
- If water drips out of the refill tube into the overflow pipe
- If a toilet turns the water on for 15 seconds or so without you touching the handle (otherwise known as the phantom flusher).

## The Dye Test

However, even if your toilet doesn't have any of these symptoms, it's still possible that it is leaking. These leaks are known as SILENT LEAKS, because they usually go undetected. There is an easy test you can do that will positively tell you whether or not your toilet is leaking. And if the test shows that the toilet is leaking, there is a second test that tells you what part inside the tank is responsible and needs fixing.

Remove the cover on the toilet tank and carefully set it aside so it can't be accidentally knocked over and cracked. Remove any "in-tank" bowl cleaners that color the water and begin the test with clear water in the tank as well as in the bowl.

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You'll need some dye. Some municipal water companies will provide dye capsules or tablets, but food coloring or instant coffee works fine. Another great suggestion from a viewer is to use several tablespoons of a powdered fruit drink mix; grape flavored is perfect. Now put enough dye in the tank water to give the water a deep color. Wait 30 minutes and make sure nobody uses the toilet. In 30 minutes if you find any of the dyed water is now in the toilet bowl -- your toilet is leaking. A properly operating toilet will store water in the tank indefinitely without any water running into the bowl. A student once told me she thought that water was supposed to be running in the toilet bowl to help keep it clean. Another student told me that she thought when you had a leaking toilet there would be water visible on the floor.

Water on the floor around a toilet is certainly a problem. It can be dripping off a sweaty toilet tank during humid weather; it can mean the wax sealing ring under the bowl has disintegrated, or the bowl is cracked; or it can mean the connections under the tank are leaking.

So for now, let's say you've done the dye test and found your toilet is leaking, you now have to find out which part is the culprit... the flush valve or the refill valve. And there's another simple little test that points to the perpetrator of the crime.

## The Pencil Test

Draw a pencil line on the back wall of the tank on the inside of the tank at the water line. Then turn the water supply off, either under the tank or at the main shutoff -- wait 20 to 30 minutes. If the water level remains at the pencil mark -- the leak is occurring at the REFILL VALVE, the unit in the left side of the tank. If the water level falls below the pencil mark -- the leak is in the FLUSH VALVE, the unit located in the center of the tank.

If you have determined the leak is at the flush valve and you replace the ball, flapper, seal or whatever and it still leaks, there is one more test to further try and pinpoint the problem. This time turn the water off to the toilet before going to bed. In the morning, check the water level. If there's about an inch in the bottom of the tank and the water level is even with the edges of the seat, the

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leak is either a bad stopper (ball, flapper or whatever) or a damaged seat. On the other hand, if the tank is almost entirely empty, and the water level is below the edges of the seat, the problem is a damaged gasket under the flush valve. This means the tank will have to be separated from the bowl in order to get to the connections.

If you don't have more than one bathroom and must use the toilet during the night, flush the toilet with a bucket of water from the bathtub. Fill a scrubbucket with water and dump the water into the bowl all at one time. It will clear the bowl.