

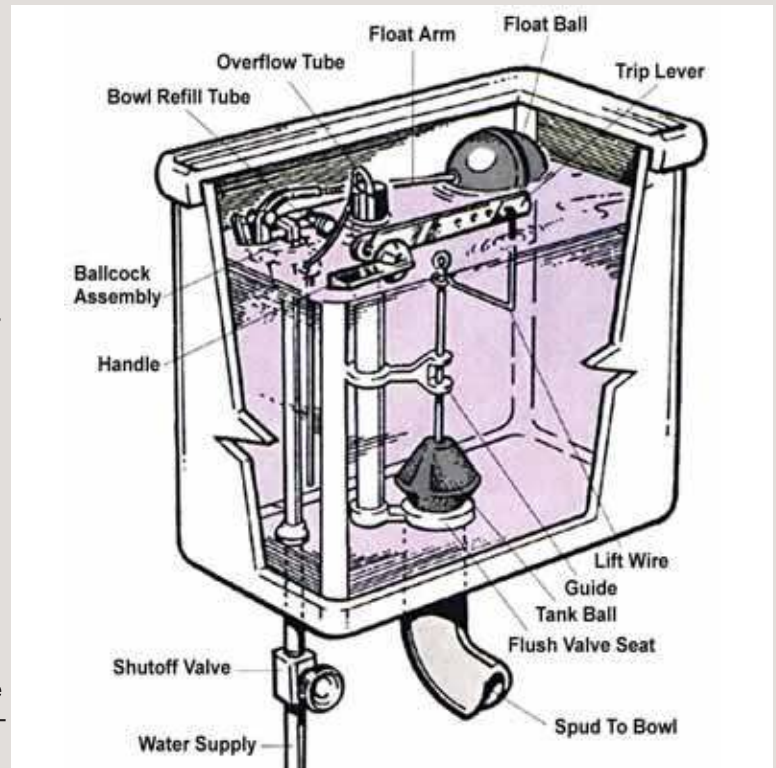
How to Fix a Toilet

Compared with a clogged toilet, tank troubles can seem relatively insignificant. Yet strange noises or continuous water running can be more than annoying. They can also be costing you money in wasted water. Fortunately, you can eliminate most tank troubles quickly and easily. Once you know how the toilet works, you can start to look for the source of toilet tank problems. Lift the lid off your toilet tank, and you should be able to follow this procedure quite easily.

When you trip the handle on the tank to flush a toilet, a trip lever is raised inside the tank. This lever lifts wires, which, in turn, raise the tank ball or rubber flap at the bottom of the tank. When the flush valve opening is clear, the water in the tank rushes out past the raised tank ball and into the toilet bowl below. This raises the level of water in the bowl above the level of water in the toilet trap.

While the water is rushing out of the tank, the float ball, which floats on top of the water in the tank, drops down. This pulls down on the float arm, raising the valve plunger in the ballcock assembly and allowing fresh water to flow into the tank. Since water seeks its own level, the water from the tank pushes the bowl water out into the drain, causing a siphoning action that cleans everything out of the bowl. When all the water is gone from the toilet bowl and air is drawn into the trap, the siphoning stops. Meanwhile, the tank ball falls back into place, closing the flush valve opening.

As the water level rises in the tank, the float ball rises until the float arm is high enough to lower the valve plunger in the ballcock assembly and shut off the incoming water. If the water fails to shut off there is an overflow tube that carries excess water down into the bowl to prevent the tank from overflowing. If water flows continuously out of the tank to the bowl and down the drain:



Step 1: Lift up on the float arm. If the water stops, you know the problem is that the float ball doesn't rise far enough to lower the valve plunger in the ballcock assembly. One reason could be that the float ball is rubbing against the side of the tank. If this is the case, bend the float arm slightly to move the ball away from the tank side.

If your toilet runs continuously, check the guide and lift wire that raises and lowers the tank ball to be sure they are aligned properly.

Step 2: If the ball doesn't touch the tank, continue to hold the float arm and remove the ball from the end of the arm by turning it counter-clockwise. Then shake the ball to see if there's water inside it, as the weight of the water inside could be preventing the ball from rising normally. If there is water in the ball, shake it out and put the ball back on the float arm. If the ball is damaged or corroded, replace it with a new one. If there is no water in the ball, put the ball back on and gently bend the float rod down to lower the level the float ball must reach to shut off the flow of fresh water into the tank.

Step 3: If the above steps don't solve the problem, check the tank ball at the flush valve seat. Chemical residue from the water can prevent this ball from seating properly, or the ball itself may have decayed. Water will seep through the flush valve opening into the toilet bowl below. Turn off the water at the toilet shutoff valve and flush the toilet to empty the tank. You can now examine the tank ball for signs of wear and examine the tank ball for signs of wear and install a new ball if necessary. If the problem is chemical residue on the lip of the flush valve opening, take some wet-dry emery cloth, steel wool, or even a knife and clean away the debris.

Step 4: If the excess water still flows through the toilet, the guide or the lift wire that raises and lowers the tank ball may be out of the line or bent. Make sure the guide is in place so that the wire is directly above the flush valve opening. Rotate the guide until the tank ball falls straight down into the opening. If a lift wire is bent, try to bend it back to the correct position, or install a new one. Make sure the trip lever rod is not rubbing against anything and the lift wire is not installed in the wrong hole of the rod; either situation could cause the tank ball to fall at an angle and not block the opening as it should.

If neither the float ball nor the tank ball is at fault, then the problem must be in the ballcock assembly.