

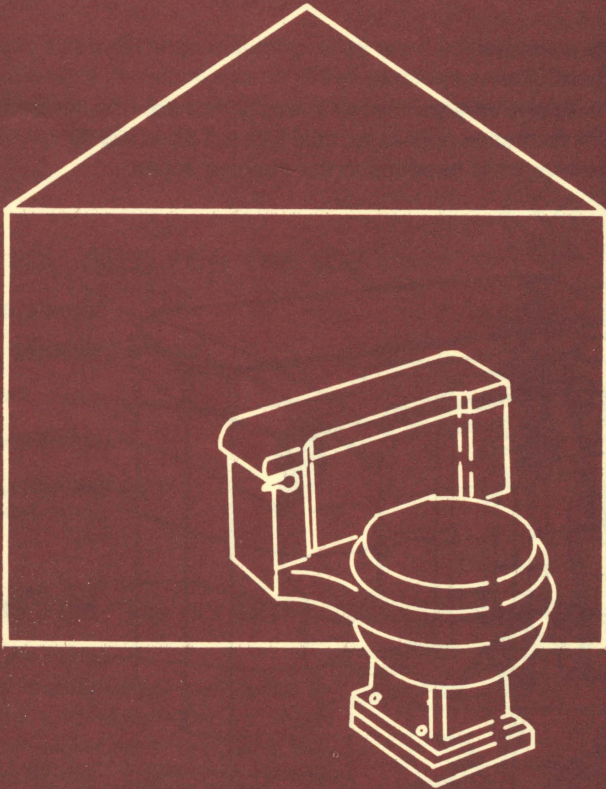
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YOU CAN DO IT!

Repairing a Toilet



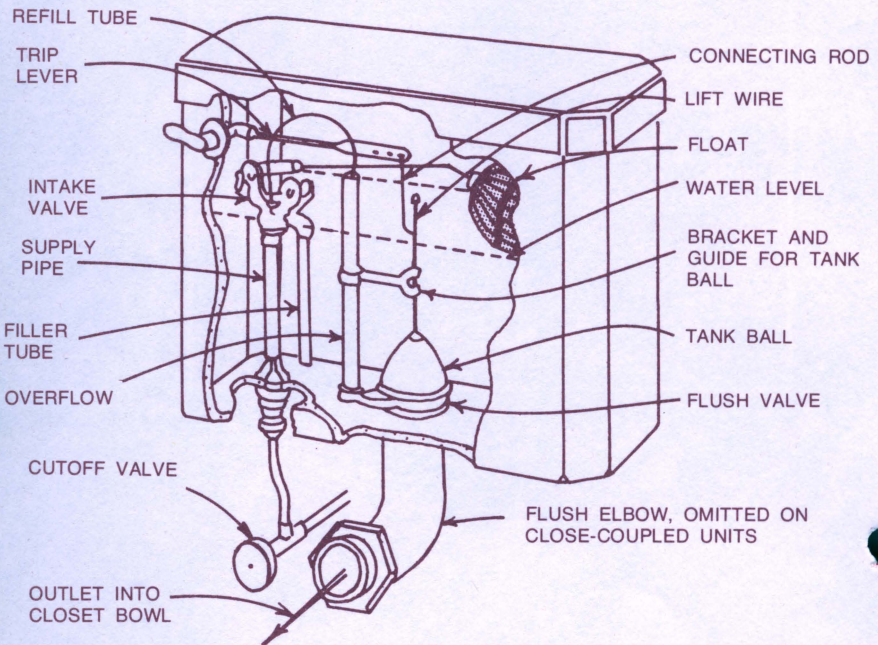
THE TEXAS A&M UNIVERSITY SYSTEM
TEXAS AGRICULTURAL EXTENSION SERVICE
Daniel C. Pfannstiel, Director, College Station, Texas

YOU CAN DO IT!

REPAIRING A TOILET

Extension Housing and Home Furnishing Specialists
The Texas A&M University System

Water closets or toilets vary somewhat in design but are enough alike that the same general repair information applies to most types. To find out the cause of toilet repair problems, observe what happens in the flushing action:

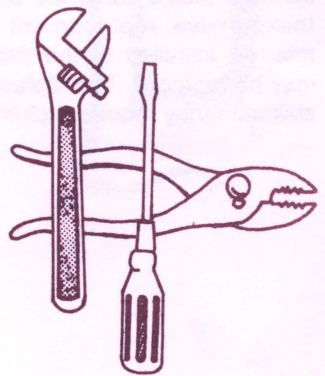


- Tripped lever causes the tank ball to lift, opening the outlet so that water flows swiftly from tank to bowl.
- Tank ball sinks back into place, closing off the outlet.
- Float ball drops with water level, opening intake valve through which fresh water flows into the tank.
- Rushing water pushes float ball up until it closes the intake valve, shutting off the supply of fresh water when the tank is full.

Toilet parts most often requiring repair are the flush valve, intake valve and float ball. Inexpensive replacements for these parts are readily available for most kinds of toilets. They can be installed quickly and easily with or without the aid of a professional plumber.

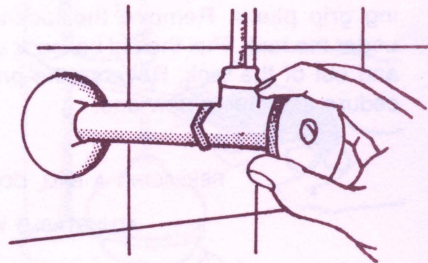
WHAT YOU NEED FOR THE JOB

- An adjustable wrench
- Pliers
- Screwdriver
- Replacement parts



REPAIRS FOR THE SIX MOST TROUBLESOME TOILET PROBLEMS

Most homemakers can learn to recognize and repair the six most troublesome toilet repair problems. Before starting any repair, shut off the toilet's water supply valve under the tank. If the toilet does not have a shutoff valve, flush the toilet to empty the tank; then gently prop a stick under the float arm.

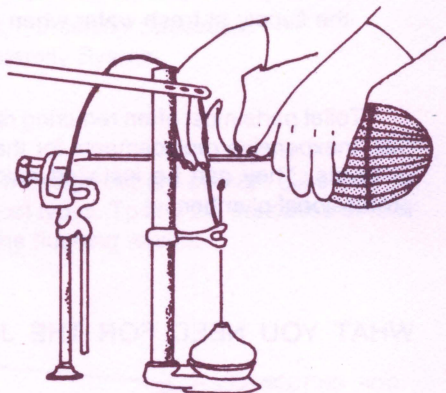


Problem 1: Tank fills, water still runs

First, check the tank float. It must ride high enough on the water to shut off the intake valve. The water level in most tanks should be three-fourths of an inch below the top of the overflow. If the water level is too high, adjust the float position by gently bending the float arm wire slightly downward.

If the float still rides low in the water, it may have a leak. Unscrew the old float ball and replace it with a new one. Non-corrosive plastic and polystyrene float balls are available.

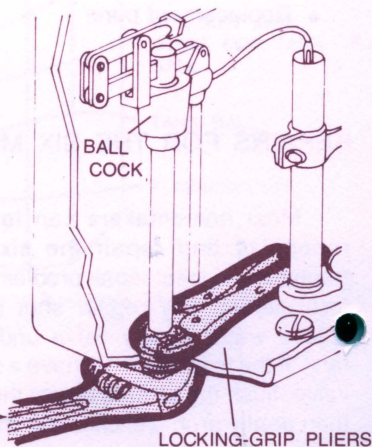
If lifting upward on the float rod doesn't shut off the water, washers inside the intake valve are likely worn. Inexpensive replacement washers may be installed or the intake valve may be replaced. The replacement installation may require a plumber.



The intake valve, supply line and filler tube are called the ballcock. When this unit needs to be replaced, hold the ballcock at the base with locking grip pliers. Remove the locknut under the tank. Pull the old ballcock up and out of the tank. Reverse the procedure to install a new one.

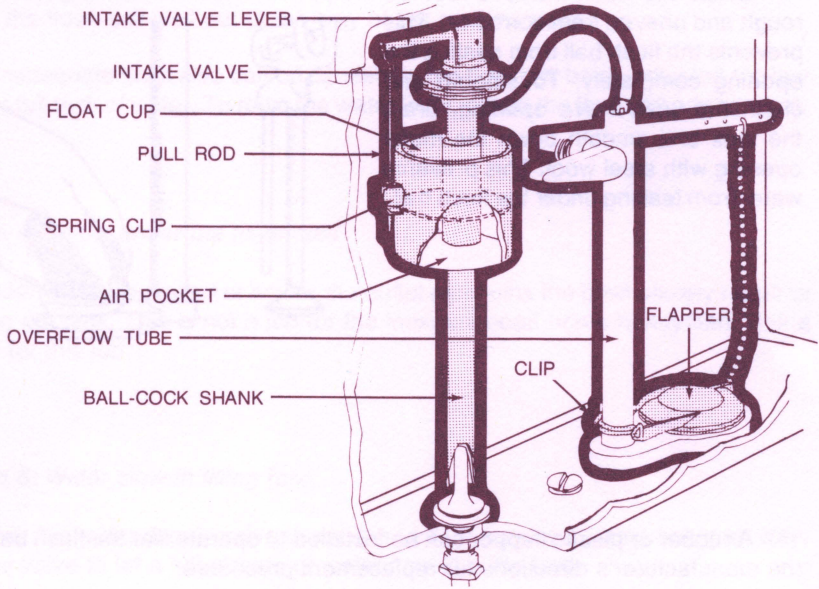
REPLACING A BALL COCK

ADJUSTABLE WRENCH



There are other ballcock devices on the market in addition to the one illustrated on page 4. Pictured here is a floating cup ballcock.

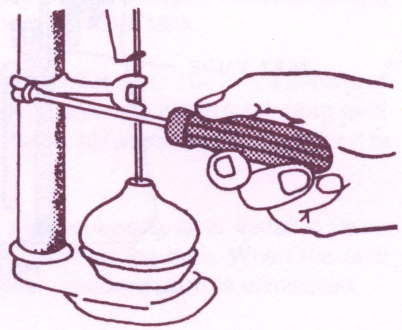
The floating cup ballcock does not require a float assembly. Water pressure controls the inlet valve.



Problem 2: Water runs, tank doesn't fill

A running toilet may be caused by a defect in the rod system, the flush ball or the flush valve.

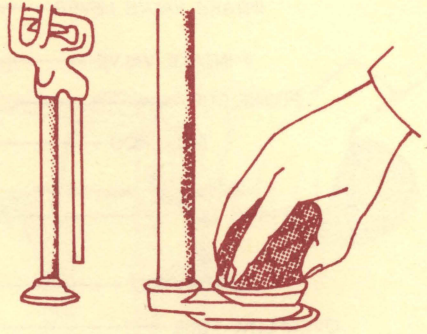
Oftentimes, the *rod system* that raises and lowers the flush ball becomes corroded or bent. Smooth rough, corroded wires with steel wool and purchase replacements. A guide that is out of alignment will prevent the flush ball from dropping directly over the flush valve. To realign, loosen the setscrew and move the guide back and forth until the ball drops directly over the valve. Retighten the screw.





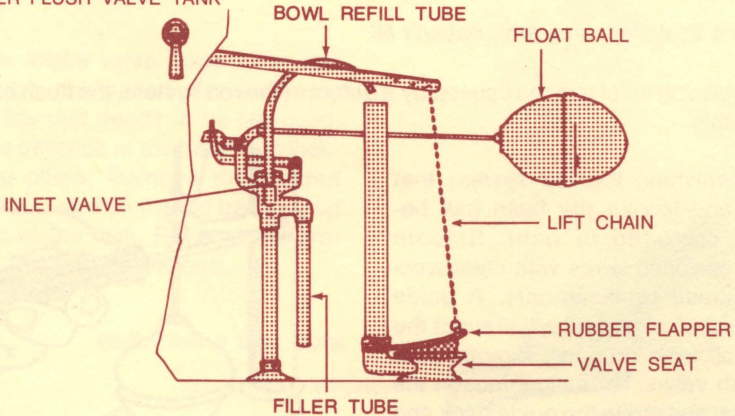
A *flush ball* that does not seat properly on the outlet valve is sometimes the cause of a "running toilet." If the rod system is operating properly, the trouble may be a worn tank ball. If the rubber has hardened or if the ball is out of shape, purchase a replacement ball and screw it into the end of the lift wire.

Often the *flush valve* becomes rough and uneven from corrosion. This prevents the flush ball from sealing the opening completely. To smooth and clean the flush valve opening, drain the tank and smooth down the metal opening with steel wool. This prevents water from leaking under the flush ball.



A rubber or plastic flapper can be installed to operate like the flush ball. Follow the manufacturer's directions for replacement procedure.

FLAPPER FLUSH VALVE TANK



**Problem 3: Inadequate flush**

When the flush handle must be held down to complete the flushing action, the lift wires may be at fault. The lift wires may not be raising the tank ball high enough to prevent the force of the outrushing water from pulling it back down too quickly. If this is the case, straighten and rebend the upper lift wire to shorten it. The shorter lift wire will hold the flush ball well out of the way of the rushing water.

An inadequate flush also can be caused by the float ball being adjusted too low to allow a full tank of water. To raise the water level, adjust the float ball arm upward.

Problem 4: Leaks under the toilet tank

A toilet leak at the outlet or where the outlet pipe joins the bowl usually requires removing the tank. This is not a job for the inexperienced home handyman. Call a plumber for this job.

Problem 5: Water slow in filling tank

Check the water supply valve under the tank. It may be opened only part way. Open the valve to let a full stream of water flow into the tank.

Problem 6: Sweating toilet tank

A dripping toilet tank is annoying and can cause floor damage if left unattended. There are several ways to prevent condensation on a toilet tank.

One way is to install an *insulating liner* inside the toilet tank. The liner keeps cold water from chilling the tank. Another method is to put an uninsulated *tempering tank* in the garage, attic or inside the house. The tank holds the water long enough for it to warm up before going into the toilet.

The simplest way to prevent a toilet tank from sweating is to install a *valve* which adds a little warm water to the cold water entering the tank. When the tank temperature and the water temperature are similar, condensation is eliminated.

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