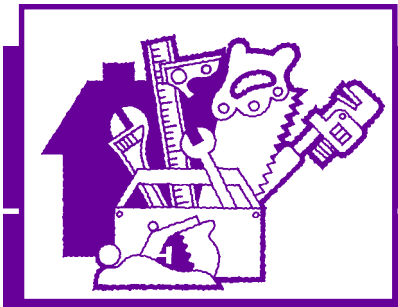
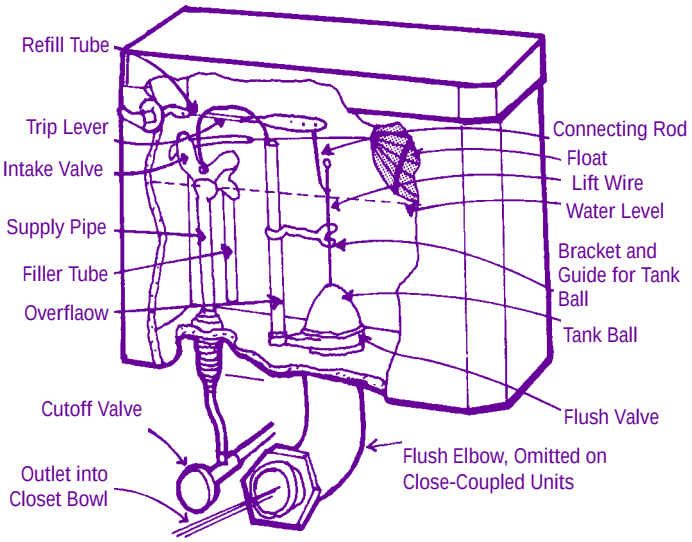
HL 222 Rev. April 1994



YOU CAN DO IT!

Repairing A Toilet



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:

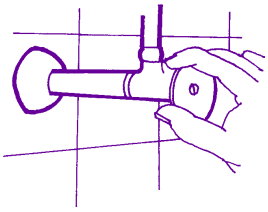
- Tripped lever causes the tank ball to lift, opening the outlet so that water flows swiftly from tank to bowl.
- Tank ball sinks back into place, closing off the outlet.
- Float ball drops with water level, opening intake valve through which fresh water flows into the tank.
- Rushing water pushes float 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 replacement 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

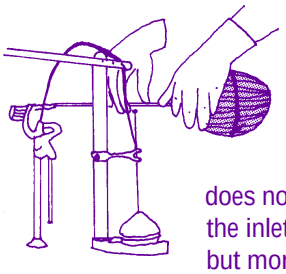
REPAIRS FOR THE SIX MOST TROUBLESOME TOILET PROBLEMS



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.



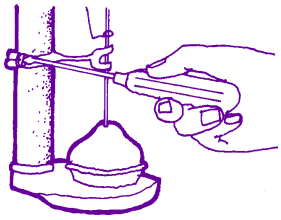
If the float still rides low in the water, it may have a leak. Unscrew the old float ball and replace it with a new one. Noncorrosive plastic float balls are available.

If lifting upward on the float rod does not shut off the water, washers inside the inlet valve are likely worn. It is simpler, but more costly, to replace the valve unit than to replace the washers. Removal of the worn valve and replacement installation may require a plumber.

Problem 2: *Water runs, tank does not fill*

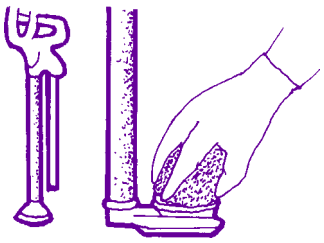
A running toilet may be caused by a defect in the rod system, the flush ball, or the flush valve.

Often, the *rod system* that raises and lowers the flush ball becomes corroded or bent. Smooth rough, corroded wires with steel wool or 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.



CLEMSON EXTENSION

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 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.

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 bend 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 adjust the water level, bend 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 the 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 insulated 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 temperature of the tank water is raised and the tank itself is then warmer, condensation is eliminated.

Reprinted by Linda Redmann, Extension residential housing specialist, and Barbara Griffin, assistant professor, Agricultural Engineering. Credit is extended to the Texas Agricultural Extension Service.

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