HOW-TO BOOKLET #3009

TOILET TROUBLES

TOOL & MATERIAL CHECKLIST

- ❑ Suction Cup for Toilets
- ❑ Tape Measure
- ❑ Pipe Wrenches
- ❑ Adjustable Wrench
- ❑ Bucket
- ❑ Dipper
- ❑ Plastic Garbage Bag
- ❑ Plumber's Auger with A Corkscrew End

Read This Entire How-To Booklet for Specific Tools and Materials Not Included in The Basics Above.

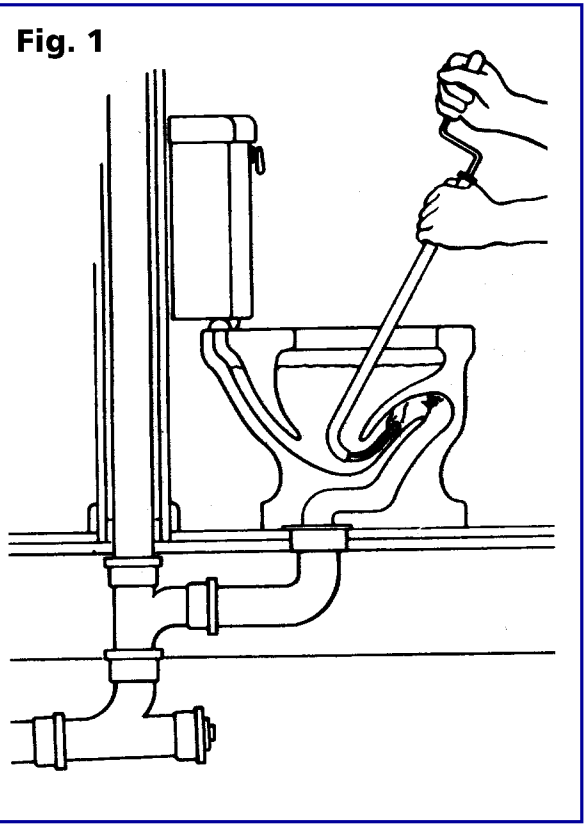


Fig. 1

Toilets are made up of two components: the flush tank, which holds water and a flushing assembly, and the toilet bowl, which handles the waste.

Although mechanically simple, toilets are subject to malfunctions from time to time—just like anything mechanical. Most problems will concern the flush tank. How-To Booklet No. 3008 can help you solve most flush tanks troubles that arise. This Booklet addresses toilet bowl breakdowns and what you may be able to do about them.

Before you buy any tools or materials, read this booklet first. By so doing, you may be able to save money and hours of time.

The only "unsolvable" problem with a toilet bowl—as such—is a cracked or broken bowl. That is, a cracked or broken bowl cannot be satisfactorily repaired. It must be replaced. This is a job most do-it-yourselfers can do, as explained elsewhere in this How-To Booklet.

CLOGGED BOWL BREAKTHROUGHS

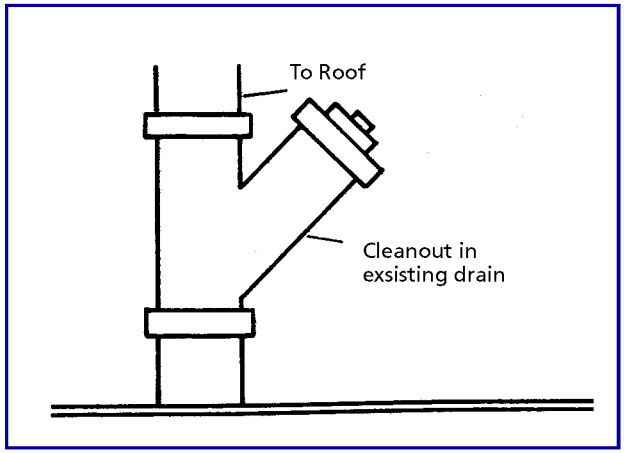
The situation is this: you flushed the toilet. The water from the flush tank entered the bowl but the waste in the bowl did not go down the drainpipe. The bowl is now overflowing onto the floor or nearly overflowing onto the floor and you don't dare flush the tank again.

1. Assemble a large bucket (about 5 gallons) or a large plastic wastebasket that doesn't leak; a plastic garbage bucket liner; a tin can or vessel that you can remove water with; a toilet auger with a corkscrew end (or a straightened wire coat hanger with a hook on the end of the wire); a vacuum cup plumber's friend; and a short piece of string—about 2 feet.
2. Position the bucket/basket near the bowl, along with the dipper. Stick your working hand and arm into the plastic garbage bag and tie the bag via a slipknot at or above the elbow. The bag will protect your hand and arm from the mess in the bowl.
3. With the tin can, dip as much of the mess as possible from the bowl and into the bucket/basket. Remove the plastic protector.
4. With the auger go down through the bottom of the bowl into the toilet trap. **Fig. 1** shows how the auger fits into the drain/trap passageway. Turn or crank the auger until it snags the debris that is clogging the trap. Pull this debris out; do not force it through the trap into the main drain pipe.

If you don't have an auger, a bent-out section of a wire coat hanger with a small hook on one end may work, especially if the debris is a washcloth or towel or object that isn't far into the drain/trap opening.

With the object removed, flush the toilet. The bowl should now operate normally. However, if you get only a partial flush, try flushing the toilet once again. Still a partial flush?

Insert the suction cup plumber's friend into the bottom of the bowl. Get directly over the suction cup handle so you will have maximum force. Now, work the plunger up-and-down very hard and quickly, keeping the suction cup down in the bottom of the bowl. Keep it positioned; don't lift it up out of the toilet as you work it.



Give the plunger 50 hard plunges before you stop.

The vacuum action of the suction cup should loosen any debris partly blocking the drain/trap. Try flushing the toilet once again. It should now work normally.

A completely clogged bowl will not respond to the suction cup treatment. Do not attempt to keep flushing the toilet to remove the blockage. And do not under any circumstances pour chemical drain cleaner into the bowl.

The problem that exists here is probably a blocked drain pipe below the trap of the toilet. See illustration of house drain system. You have three options:

- Call a pro.
- Remove the toilet bowl and rod the drain pipe. How to remove the bowl is detailed below.
- Find the clean-out port at the bottom of the vent stack to this drain, open the port, and rod the pipe.

Our suggestion: call the pro. The blockage could be in the pipe that runs from your home to the main sewer.

The equipment necessary to clear this blockage is very costly to buy. The pro probably will get up onto the roof of your home and rod the drain system from the top of the vent stack to the main sewer.

WHEN BOWLS SPRING LEAKS

A leaking bowl can be caused by one of several problems. Go down this checklist:

- **Is the water on the floor caused by moisture condensation (sweating) of the flush tank or, sometimes, the toilet bowl?**

  Water is very insidious. It can form puddles and wet spots long distances away from its source.

  Condensation may be the problem. If so, you can cover the flush tank with a jacket made especially for this purpose.

  Or, you can line the inside of the tank with insulation. You can buy kits of material to install in the tank. But it is less expensive to use sheets of foam rubber or foam plastic and glue them inside the tank.

  First, drain the tank (after shutting off the water) then mop the inside of the tank completely dry with a sponge. To adhere the liner, use one of the rubber based exterior construction adhesives that is compatible with the rigid plastic or foam rubber.

  These caulks are sold in cartridges to fit caulking guns.

- **Is the small pipe supplying water to the flush tank leaking either at the shut-off valve or at the bottom as the ballcock assembly on the bottom (outside) of the tank?** If so, try tightening this connection with an adjustable wrench. Be careful; don't apply too much turning pressure with the wrench.

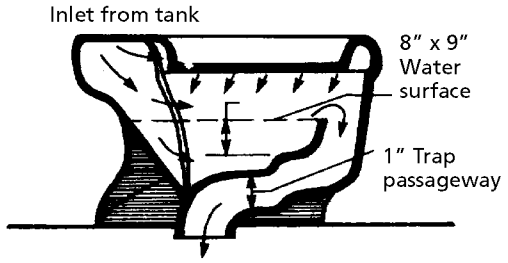
Is the flush tank leaking where it joins the top of the toilet bowl? There is usually a rubber gasket at this junction. Sometimes, pressure on the flush tank from leaning backward against it causes the hold-down bolts and this gasket to loosen and, therefore, leak.

With a standard slot screwdriver, try tightening the bolts from within the tank. If the rubber washer is the trouble, you will have to remove the flush tank from the toilet bowl to replace it. This procedure is detailed below.

Is the bowl leaking around its bottom rim which sets on the floor?

First, try tightening the bolts that hold the bowl to the floor. You will probably have to remove the porcelain caps that cover the bolts. Just pry them up and off with the tip of a screwdriver. You must be careful! The caps can be easily damaged. Then, with an adjustable wrench or screwdriver, turn down the bolts one or two complete turns. Give each bolt the same number of turns.

If the bolt-tightening doesn't stop the leak, read on:



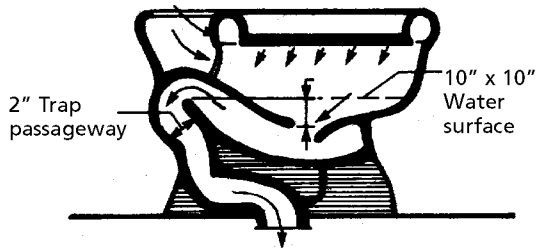
Washdown

Is the wax ring seal between the drain pipe and the toilet bowl leaking? If the toilet hold-down bolts are tight and the leak is still there, chances are the wax ring seal is worn and needs replacement.

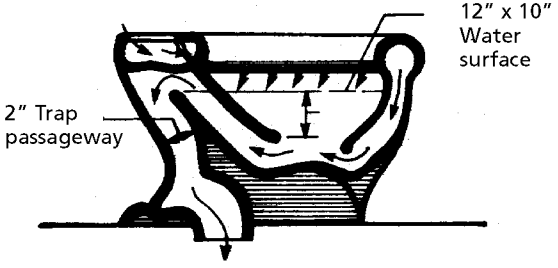
In most cases, you don't need to remove the tank from the bowl. But you do have to remove the tank and the bowl from the floor or wall and then replace it again. You must be careful; we recommend that you enlist the aid of a helper.

To remove a toilet or tank.

1. First, turn off the water at the tank supply valve or the main shut-off valve to the house. Flush the toilet so the tank is emptied. It will be necessary to hold open the ballcock to drain as much water as possible. There will be some water in the tank, which will have to be cleaned out with a sponge. A sponge will also be required to mop any water in the toilet bowl.
2. Remove the nuts holding down the bowl. If the nuts won't come out, insert a bare hacksaw blade between the bottom of the toilet and the top of the floor and saw the bolts through with the blade. The metal is soft and the job will go quickly. However, be careful not to damage the flooring material with the blade.
3. With your helper, lift the toilet up off the hanger bolts and place it on a stack of newspapers or an old blanket or a rug. Remember that both the toilet bowl and tank are porcelain, a form of glass, and are fragile. The toilet can chip or crack if not handled gently. If you have any doubt about handling the unit, remove the tank first from the bowl and then the bowl. It makes a less bulky package with which to work.
4. Turn the bowl so you can remove the old wax ring or plumber's putty. Then install a new wax ring. The ring is available at most home center stores; one size fits all. Use the wax ring instead of plumber's putty.
5. Now position the toilet tank over the hanger bolts (new ones if you had to cut the old ones) and gently lower the bowl down on the bolts. This is critical: The toilet bowl must be set absolutely straight down on the bolts and wax ring. Therefore, you have to get over the center of the bowl to control its downward angle. Have your helper guide the bowl onto the bolts. If the wax ring is not crushed in a straight down angle, it will have to be replaced with a new one. Once improperly crushed, the wax ring can not be used again.



Reverse trap



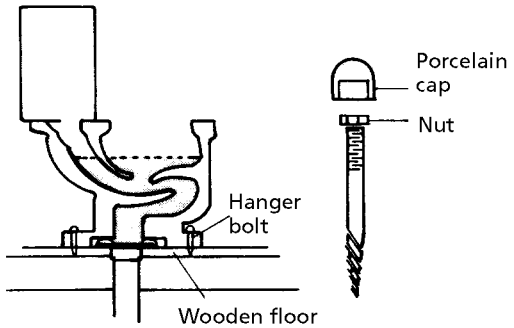
Siphon jet

6 Press the bowl down on the hanger bolts so the bowl is about level. Then replace the nuts on the bolts and turn them gently but firmly, so the toilet bowl is pulled down flush with the floor.

If your home has plastic drain lines, the toilet will be fastened with bolts that fit into slots in the flange at the top of the drain. The plastic flange is fastened to the floor (wooden) with wood screws.

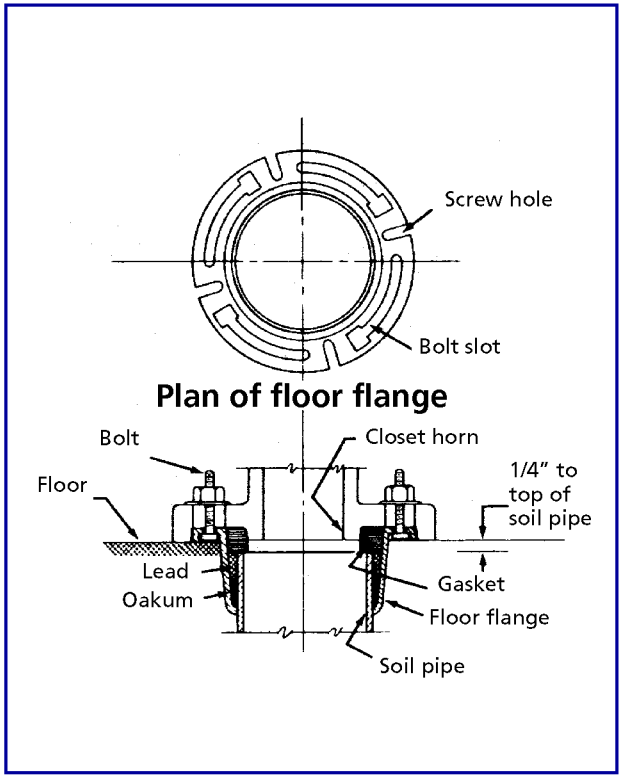
The square-headed bolts fit in curved slots in the flange and thus are prevented from turning when you install or remove the nuts that hold down the bowl. The same wax ring is used for a toilet set on plastic pipe as for one on cast iron or copper pipe. The hold-down nuts are turned gently but firmly to pull the bowl flush with the floor. However, do no turn the bolts too much because you can crack the porcelain of the bowl.

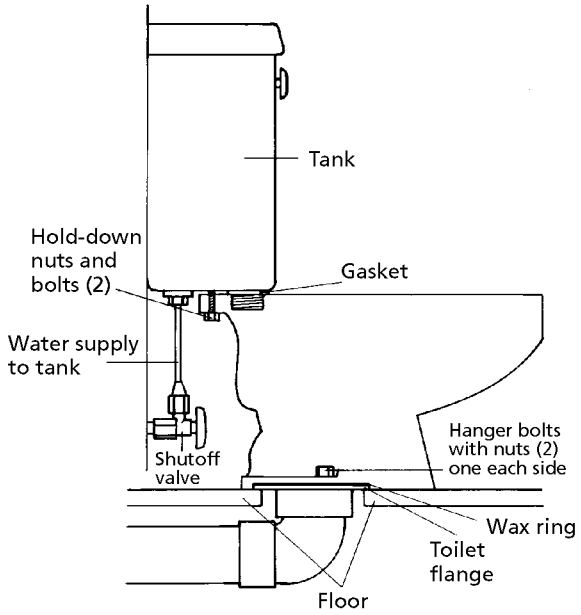
While you have the toilet bowl off the floor, check for water stains between the tank and toilet that would indicate a water leak. If there are such stains, unbolt the tank and replace the gaskets between the tank and the toilet as explained above. It is much easier to do this while the toilet is inverted since the nuts that hold the tank to the toilet are under the back flange of the toilet. This means you will not have to stand on your head to remove and replace them.



If the toilet tank connects to the wall instead of to the bowl, it will fasten to the wall and be connected to the bowl by a curved section of pipe. To take the bowl off the floor, you must first disconnect the curved section of pipe between the tank and bowl.

If badly corroded, which usually is the case, cut it free with a hacksaw and plan to replace it. Have a pan or bucket handy to catch any water left in the pipe. Buy a new section of pipe to replace the one you cut, then carefully remove the pipe sections from the tank and bowl. If you are placing a toilet bowl and/or tank, simply discard the units and use a new curved section of pipe. You might also decide to install a new toilet with the tank fastened to the bowl. All gaskets and parts are usually provided with the new units.





NEW TOILETS FOR OLD

If you decide to replace an old toilet with a new one, the mechanics for doing so are explained above.

What you will need to know at the store is the measurement from the wall out to the hold-down bolts or the center of the toilet drainpipe.

There are many new and different styles of toilet assemblies: oval, elongated, low profile and so on, in a wide range of colors and noise-controlled flushers. For most products, installation is the same as putting in a matching replacement toilet or resetting a toilet on a new wax ring. An exception might be an up-flush type toilet for use in a new basement space. Special piping is needed for this type of installation since the flush is under pressure instead of gravity.