

HOW TO REPLACE A FLUSH VALVE



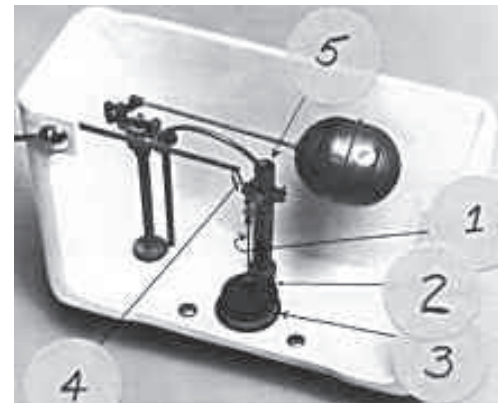
Leaks at the Flush Valve

Leaks at the FLUSH VALVE are caused by the following problems...

- A worn out or defective tank-ball, flapper, seal, disk or whatever part is attached to the handle and acting as a plug in the bottom of the tank.
- A damaged flush valve seat... the rim of the large hole in the bottom of the tank is rough or pitted.
- A split or hole in the overflow pipe.
- A damaged gasket under the flush valve.

Leaks at the Flush Valve

1. Lift rod or chain connecting trip lever (handle) to tank-ball or flapper.
2. Tank-ball or flapper (the stopper).
3. Flush valve seat (big hole in bottom of tank).
4. Trip lever (handle) connection to lift rod.
5. Overflow pipe (vertical pipe standing in center of tank)

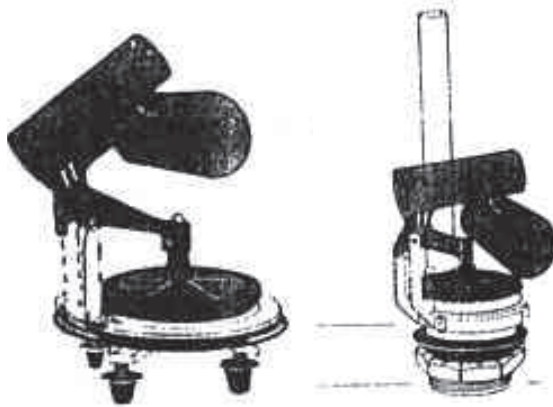


Once you have decided the flush valve needs attention, turn the supply water off to the tank, flush the toilet and hold the handle down to allow as much water as possible to drain out of the tank. Disconnect the chain, strap or rod from the trip level (handle). The tank ball shown in the above picture unscrews from the bottom of the lift rod. A flapper, on the other hand, attaches in several ways. One is attached by little wings that slip over hooks on the sides of the overflow pipe at the bottom, or it may have a thick ring that can be pulled up and off the overflow pipe.

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Tilting Valves



The American Standard tilting flush valve has two fairly large plastic cylinders (black sometimes white) at right angles to each other with a disc attached to the bottom. One type disc unscrews, another pulls off a stub on the bottom. In the illustrations it's difficult to see the difference; it's even more difficult when you are looking down into a tank at the top of the valve which makes it very hard to see what you are doing here.

It's easy to push back too hard on the top of the valve or pull sideways on the disc and break the valve. So please be CAREFUL with this one. It is best to remove the entire top of the valve so you can see what you are doing. The top part of the assembly on the unit without a hinge bolt is removed by gently slipping a wide bladed screwdriver between the hinge connections and spread them apart while you lift the top off. The other type has a small bolt that holds the top in place; they are devils to unscrew, but it can be done.

When you find the flush valve overflow pipe rises as you turn the flush handle, you have to unscrew the small (one inch) disk on the top in order to remove the replaceable part on the bottom. This type of valve comes in both plastic and metal. But both have a large rubber disk on the bottom that pulls off.



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After removing the old tank ball, flapper or whatever your tank uses as a plug, clean and polish the edges of a metal seat with fine steel wool. If the seat is plastic, use a non-scratching scouring ball. Examine the surface of the seat for any pitmarks or grooves before replacing the ball, flapper or whatever. If the surface is not perfectly smooth, the valve will continue to leak after you replace the ball or flapper. In which case, the next step is to cement a new seat and flapper over the old one.

For now let's assume the seat looks good. Take the old ball, flapper, disk, etc. with you and go buy a replacement.

Anytime you have worked inside a toilet tank always check and make sure the thin refill tube is directing water into the top of the overflow pipe before you put the tank lid back on. It's very easy to overlook this little connection. This water running into that overflow pipe is what refills the bowl after a toilet is flushed. A low water level in a bowl is a symptom that the tube has come loose or was not reinstalled the last time someone worked in the tank.



Also check to make sure that when you turn the flush handle that it does NOT hit the underside of the tank lid. If it does the chain to the ball or flapper is too long and must be shortened.