

FLUIDMASTER® 400ARHRLS FILL VALVE WITH LEAK SENTRY OPTION INSTALLATION INSTRUCTIONS

⚠ WARNING

DO NOT USE IN-TANK DROP-IN TOILET BOWL CLEANERS CONTAINING BLEACH OR CHLORINE. Use of such products will: (1) **RESULT IN DAMAGE** to tank components and **MAY CAUSE FLOODING** and **PROPERTY DAMAGE** and (2) **VOID FLUIDMASTER WARRANTY.** Fluidmaster Flush 'n Sparkle Toilet Bowl Cleaning System is recommended for those choosing to use in-tank bowl cleaners and **WILL NOT VOID** the **FLUIDMASTER WARRANTY** because it will not damage the components. **DO NOT** overtighten nuts or tank/bowl may crack. Always use quality Fluidmaster parts when installing or repairing. Fluidmaster will not be responsible or liable for use of non-Fluidmaster parts during installation or repair.

LIMITED SEVEN-YEAR EXPRESS WARRANTY

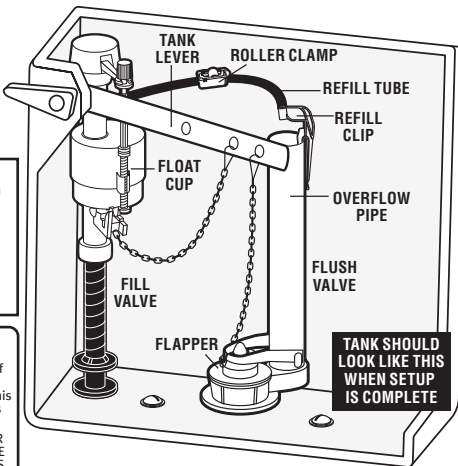
Subject to the "Exclusions" set forth below, Fluidmaster Inc. promises to the consumer to repair, or at the option of Fluidmaster Inc. to replace any part of this plumbing product which proves to be defective in workmanship or materials under normal use for five years from the date of purchase. All costs of removal, transportation and reinstallation to obtain warranty service shall be paid by the consumer. During this "Limited Seven Year Express Warranty," Fluidmaster Inc. will provide, subject to the "Exclusions" section set forth below, all replacement parts free of charge, necessary to correct such defects. This "Limited Seven Year Warranty" is null and void if this plumbing product has not been installed and maintained in accordance with all written instructions accompanying the product, and if non-Fluidmaster Inc. parts are used in installation.

EXCLUSIONS: FLUIDMASTER INC. SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING COSTS OF INSTALLATION, WATER DAMAGE, PERSONAL INJURY OR FOR ANY DAMAGES RESULTING FROM ABUSE OR MISUSE OF THE PRODUCT, FROM OVERTIGHTENING OR FROM FAILURE TO INSTALL OR MAINTAIN THIS PLUMBING PRODUCT IN ACCORDANCE WITH THE WRITTEN INSTRUCTIONS, INCLUDING USE OF NON-FLUIDMASTER PARTS. **DO NOT USE IN-TANK DROP-IN TOILET BOWL CLEANERS CONTAINING BLEACH OR CHLORINE.** USE OF SUCH PRODUCTS WILL RESULT IN DAMAGE TO TANK COMPONENTS AND MAY CAUSE FLOODING AND PROPERTY DAMAGE. USE OF SUCH PRODUCTS WILL VOID THIS WARRANTY.

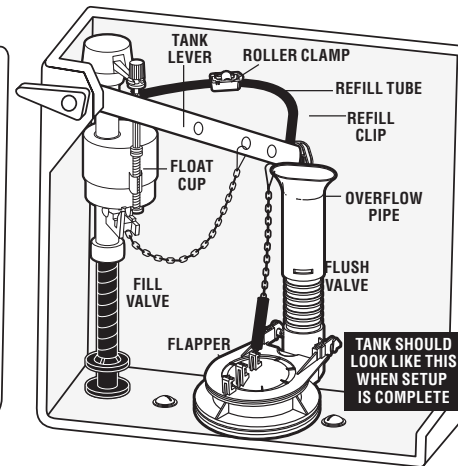
DO NOT USE



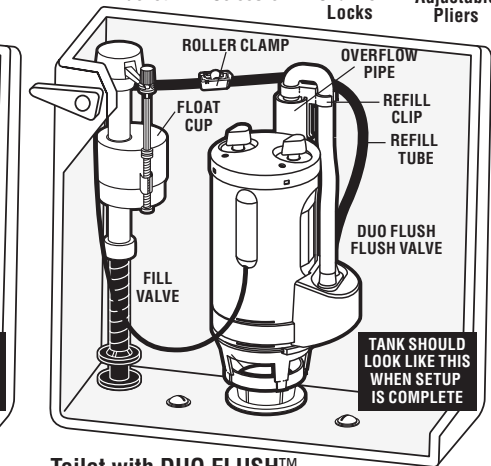
***HINT:** Pair with the patent-pending DUO Flush™ valve to convert your toilet's existing single flush valve to a dual flush valve and to boost toilet performance when connected with the PerforMAX™ fill valve.



Toilet with 2" Flush Valve



Toilet with 3" Flush Valve



Toilet with DUO FLUSH™
DO NOT USE Leak Sentry with DUO FLUSH™

TOOLS NEEDED



Bucket



Scissors



Channel
Locks



Adjustable
Pliers



Hack Saw



Sponge



FAUCET



TOILET

NEW!

Click Seal® Faucet and Toilet Connectors

The "CLICK" Let's You Know It's Sealed!™

Technology You Can Trust. Hear the "click" and know the toilet connector is properly sealed and cannot be over-tightened. Toilet Connector nut clicks & stops tightening when connector has achieved a good seal. Prevents over-tightening & cracking of connector nut and fill valve shank. Stainless steel braiding provides maximum protection against bursting.



Because drop-in cleaners used in the tank can result in damaged tank parts (see WARNING), Fluidmaster recommends the use of Flush 'n Sparkle® Toilet Bowl Cleaning System (Models 8100, 8200 or 8300). It cleans the bowl without harming tank parts by isolating the cleaner from the tank water, releasing it only to the bowl where it is needed. Cartridges supply more than 1,000 flushes and are a snap to replace.

2 Preparing The Fill Valve For Installation

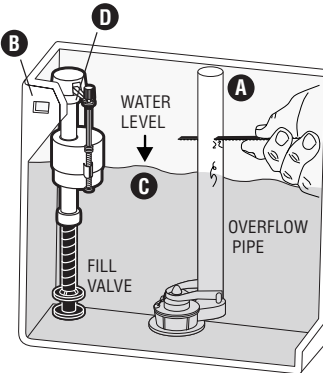
Before you install the flush valve, make sure the overflow pipe and water level of tank are correctly set.

A. THE TOP OF OVERFLOW PIPE should be cut a **minimum of 1"** below tank lever hole. **NOTE:** You can either measure the overflow pipe hole and cut outside of tank or cut pipe after installation.

B. Tank Lever Hole. Measure 1 inch down from bottom edge of tank lever hole.

C. WATER LEVEL is usually set 1/2" below top of Overflow Pipe.

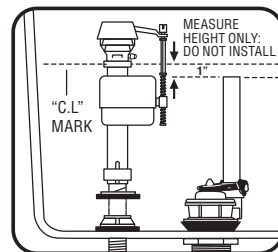
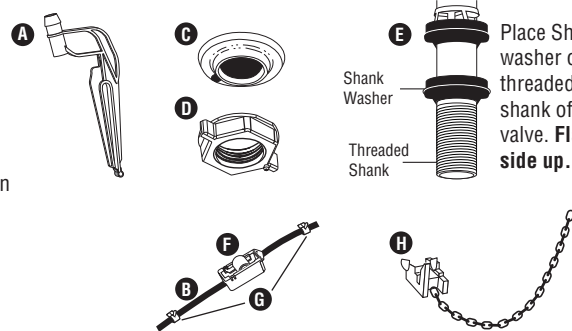
D. The CRITICAL LEVEL mark identified by C.L. on fill valve must be positioned a minimum of 1 inch above the top of the overflow pipe. This is a requirement of the **Universal Plumbing Code**.



3 Preparing Fill Valve

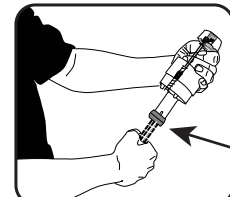
Assembly Parts

- A) Refill Clip
- B) Refill Hose
- C) Shank Washer
- D) Locknut
- E) Threaded Shank
- F) Roller Clamp
- G) Hose Clamps
- H) Leak Sentry w/chain



Place fill valve in tank, do not install. Top of fill valve **MUST** be set 3 inches above the top of the overflow pipe. This will automatically place the C.L.

Mark 1 inch above the top of overflow pipe. Remove fill valve from tank to adjust height.



Adjust height of fill valve by holding lower shank with right hand and top of

valve with left hand. Turn lower shank hard in or out of the valve body. You should hear several "clicks". Place valve in tank and check height again. The Critical Level mark identified by C.L. on valve-MUST be positioned 1 inch above the top of the overflow pipe. This is a requirement of the **Universal Plumbing Code**.

Do not move lock ring. It holds the valve body and shank together under pressure. Do not interchange body with old shank as leaking can occur.

1. Locate Leak Sentry device loose in box.

2. Install Leak Sentry device onto valve by snapping it into holes in bottom of float cup. Be sure stainless steel blade faces valve body.

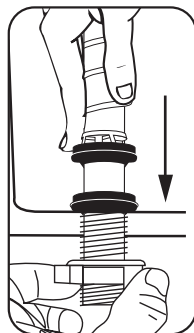
3. Leak Sentry is fully installed when device is flush with bottom of float cup.

***Leak Sentry** will work with most flappers and chain style flush valves.



4 Installing The New Fill Valve

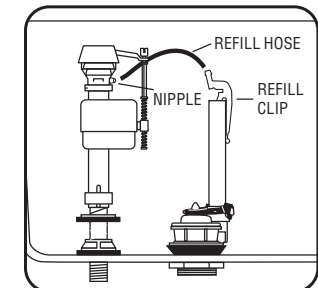
Place fill valve in tank. Make sure lid will sit on top of tank without sitting on valve. Align fill valve nipple to face center of tank. Press down on shank from inside of tank while tightening locknut. **Hand-tighten only. DO NOT OVER TIGHTEN.**



Attach one end of REFILL HOSE to REFILL CLIP. Place clip on right side of overflow pipe. Attach other end of hose to nipple on fill valve with a slight arching of hose. (See drawing). Cut tube as necessary. Do not shove refill tube down overflow pipe. This can cause major water waste.

Squeeze hose clamp. Slide to end of hose and release.

Correct set up of refill hose and refill clip to overflow pipe

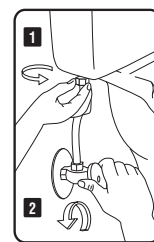


5 Water Supply Line

Inspect water supply line. Replace it if it is worn or over 5 years old, as part is under pressure.

1. Attach the Supply line coupling nut to the fill valve. **Turn the coupling nut clockwise by hand until tight. Do not over tighten the nut as it could damage the fill valve or coupling nut itself, resulting in flooding and property damage.**

2. Turn on water supply and check for leaks. **If you find leaking at bottom of tank, turn nut just enough to stop leaking. Then flush toilet to check.**

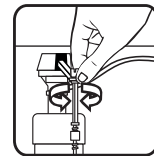


6 Adjusting Water Level

IMPORTANT: Pull Leak Sentry chain, then release to unlock float cup, so tank will fill. With water supply on, submerge the float cup under the water for 30 seconds. Set the float cup to desired level, by turning the water level adjustment screw. When adjusting float cup, flush the tank first. Then make adjustment while tank is filling.

Turn screw clockwise to raise water level or counter clockwise to lower water level. Set water to the pencil mark you made in tank. Valve will shut off at setting.

HINT: When you twist adjustment screw 8 times - float moves 1/2".



7 Water-Saving Feature: Hooking Up the Leak Sentry Chain

Flapper Chain Hook-up

Turn off water. Lift tank lever all the way up inside tank. Hold tank lever there. Pull flapper chain tight so the flapper is lifted as high as it can go and attach chain to hole in lever directly above flapper. Make sure flapper chain is straight.

Make sure flapper is closed on seat. If not, you may need to lengthen the flapper chain by a link or two to allow flapper to close and seal tank.

Leak Sentry Chain Hook-up

Lift tank lever all the way up inside tank and hold it there. Pull Leak Sentry chain until it lifts the float cup all the way up the fill valve shaft. Then connect chain & clip with no slack in chain to the tank lever.

NOTE: Do not cross Leak Sentry chain and flapper chain. If lever has only one hole, then attach to same hole.

8 Water-Saving Feature: Roller Clamp

Check bowl water level by flushing toilet. If bowl appears to be full but continues to fill, the valve may be overfilling the bowl causing excess water to siphon down the trapway. Adjust amount of water going down into the bowl as follows: Fill the bowl with a gallon of water. Wait 1 minute until the bowl water level recedes down and stops. With a pencil, draw a line at the top of the water level in bowl. Now flush the toilet. If the valve is still filling and the water is up to the line in the bowl, then the amount of water going into the bowl is too high and needs to be adjusted. Adjust the refill by turning the roller clamp with thumb to the next lower number. Flush the toilet; adjust until water level in bowl is at the pencil mark when the fill valve shuts off. If valve shuts off and bowl is not full, adjust by turning the roller clamp to a higher number. Repeat until water in bowl is up to line. "0" on roller clamp equals no refill to bowl.



TROUBLESHOOTING

IF FILL VALVE TURNS ON AND OFF BY ITSELF

- The tank is leaking water and the Leak Sentry chain is not set properly. (See Instruction #7) Try stopping the leak by resetting both flapper and Leak Sentry chain.

IF FILL VALVE WILL NOT TURN OFF

- Dirt may have gotten into the fill valve when you turned on the water. (See step "Removing The Valve Cap Assembly, Flushing Out Debris & Replacing Seal" in the Troubleshooting box).

IF FILL VALVE WILL NOT TURN ON

- Pull Leak Sentry chain, then release to unlock float cup, so tank will fill. (See Instruction #7)

IF THE VALVE WILL NOT REFILL THE TANK AFTER A FLUSH:

- If fill valve is new: Remove top cap and check for debris. If you find debris, or flow is weak: Inspect lower section of fill valve for partial blockage. Partial blockage may be at shut off or in water supply line.
- Tighten the Leak Sentry chain (See Instruction #7) a few chain loops at a time until valve refills tank after flush.

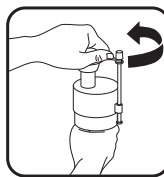
IF Water level in bowl is too low

- Make sure the refill hose is supplying water down the overflow pipe.
- Water level in tank may be too low. Raise water level to 1/2" below top of overflow pipe.
- Roller clamp may need to be rolled to a higher number.

Removing The Valve Cap Assembly, Flushing Out Debris & Replacing Seal

Removing Valve Cap Assembly

Turn off water supply & flush out tank. Push float up with right hand (see picture). Grip and hold shaft under float with right hand. With left hand, twist cap and lever counter clockwise 1/8" of a turn to unlock the top cap. Pressing down on top may be helpful with older valves. Let cap assembly hang on float cup.



Flushing Out Debris

Hold a cup over the uncapped valve to prevent splashing. Turn water supply full on and off a few times. Leave water supply off.



If Replacing Seal

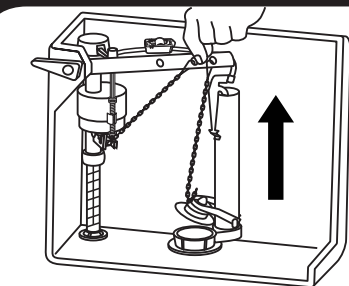
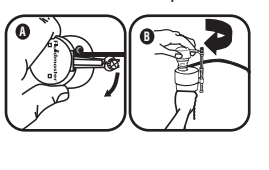


If Replacing Seal: Use only genuine Fluidmaster 242 seal

Replacing Valve Cap

A. Place cap assembly on top of gray valve body by aligning cap arm and adjustment rod next to refill hose.

B. Press down on top cap while rotating top & arm clockwise to locked position.



Testing Leak Sentry

Simulate a leak by slightly lifting flapper chain to allow 3 or 4 inches of water to slowly drain from tank. **Fill valve should not turn on**, but remain locked and stay off.

If test fails go to **Troubleshooting** section. Make sure chain is free, not tangled or caught.