

FLUIDMASTER® 402CARHR FILL VALVE & FLAPPER INSTALLATION INSTRUCTIONS

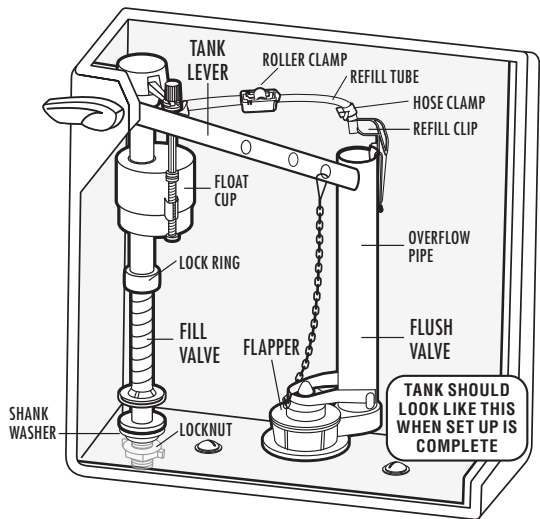
WARNING

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.

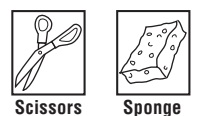
LIMITED FIVE-YEAR EXPRESS WARRANTY

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 Five 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 Five 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.



TOOLS NEEDED



DON'T USE



Fluidmaster®
30800 Rancho Viejo Road, San Juan Capistrano, CA 92675
www.Fluidmaster.com • 800-631-2011
Contact Fluidmaster for troubleshooting help or visit www.fluidmaster.com
M-F 5:30 am - 5:00 pm PST.

PARTS IN THIS KIT:

- (1) PerformMAX™ Fill Valve
- (1) Shank Washer
- (1) Locknut
- (1) Refill Tube
- (1) Refill Clip
- (1) Roller Clamp
- (2) Hose Clamps
- (1) PerformMAX™ High Performance Flapper

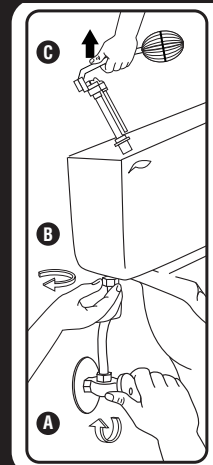
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SCAN HERE!

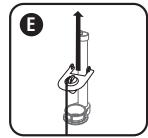
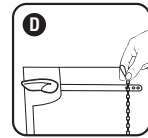


Before you begin, watch our installation video:
<http://opn.to/a/PV6p9>

PREPARATION

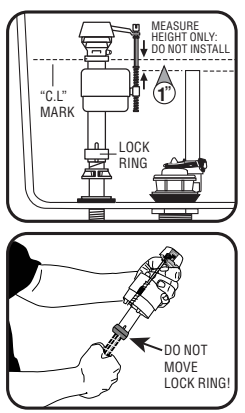


- 2 Remove Old Fill Valve & Flapper**
- Remove tank lid. Use pencil to mark water level of tank. Then follow steps A-E.
- A.** Turn off water supply (Clockwise). Flush toilet and remove excess water from tank with sponge.
 - B.** Disconnect water supply connector. Remove locknut from under tank.
 - C.** Remove fill valve from tank.
 - D.** Unhook flapper chain from tank lever.
 - E.** Remove flapper from overflow pipe on flush valve.



3 Preparing the Fill Valve for Installation

- Fill Valve Parts**
- A) Refill Clip
 - B) Refill Tube
 - C) Shank Washer
 - D) Locknut
 - E) Threaded Shank
 - F) Roller Clamp
 - G) Hose Clamps
- Place Shank washer onto threaded shank of fill valve. Flat side up.
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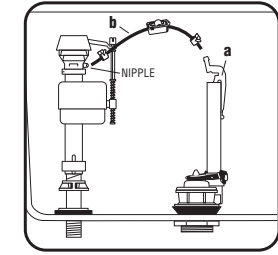
- Fill Valve Positioning:**
- A.** Position fill valve in tank – **DO NOT FULLY INSTALL.**
 - B.** Set top of fill valve 3" above overflow pipe.
- Fill Valve Height Adjustment – If Necessary:**
- A.** DO NOT MOVE LOCK RING.
 - B.** Increase height – twist lower shank counter clockwise.
 - C.** Decrease height – twist lower shank clockwise.
 - D. Critical Level Mark (C.L. Mark) MUST** be positioned 1" above top of overflow pipe – required by **Universal Plumbing Code.**

INSTALLATION

4 Installing New Fill Valve

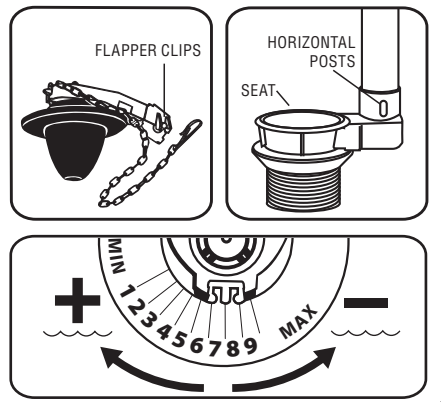
- A.** Place fill valve in tank.
 - B.** Align fill valve nipple to face overflow pipe.
 - C.** Press down on shank from inside while tightening locknut.
 - D. Hand-tighten only – DO NOT OVERTIGHTEN!** Overtightening may crack fill valve or tank causing flooding.
 - E.** Attach one end of refill tube (b) to refill clip (a).
 - F.** Place clip on right side of overflow pipe.
 - G.** Attach other end of tube to nipple on fill valve – Cut tube as necessary.
 - H.** Squeeze tube clamps and slide to ends of tube and release.
- WARNING:** Placing refill tube down overflow pipe may cause significant water waste.

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



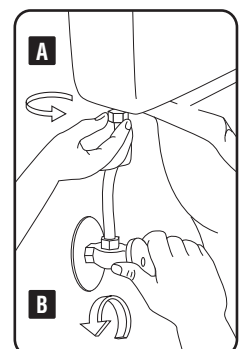
5 Installing New PerformMAX™ High Performance Flapper

- A.** Put flapper on seat.
- B.** Align flapper clips with horizontal posts of overflow pipe.
- C.** Push down on clips to connect.
- D.** Attach chain clip to tank lever – Leave about 1/2" of slack in chain.
- E.** Turn rubber portion of flapper left or right to adjust performance level.
- F.** Clockwise for greater flush volume.
- G.** Counterclockwise for lower flush volume.



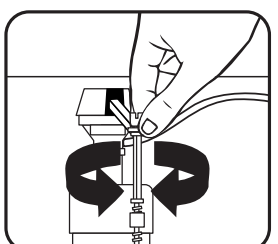
6 Attach Water Supply Connector

- A.** Attach water supply coupling nut to fill valve – Turn clockwise by hand until tight.
- WARNING:** Over tightening the nut could damage fill valve or coupling nut resulting in flooding and property damage. Fluidmaster Click Seal® Connector is recommended: a perfect seal every time without over tightening.
- B.** To check for leaks, turn on water supply.
 - C.** If leaking occurs – turn coupling nut just enough to stop leaking.
 - D.** Flush toilet to check.
- NOTE:** We recommend replacing the existing water supply connector if it is worn or over 5 years old – this will protect your home from potential flooding and property damage.



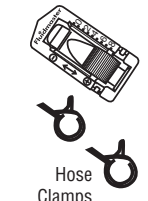
7 Adjusting Tank Water Level

- HINT:** When adjusting float cup, flush tank and make adjustment while tank is filling.
- A.** Turn water on.
 - B.** Turn water level adjustment screw to set float cup to desired level.
 - C.** Turning adjustment screw clockwise raises water level.
 - D.** Turning adjustment screw counter clockwise lowers water level.
 - E.** Flush toilet to check new level.
- HINT:** Twisting adjustment screw 8 times moves float by 1/2".



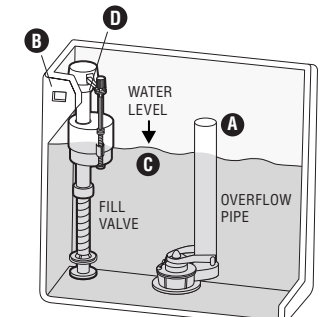
8 Water-Saving Feature: Roller Clamp

- HINT:** Flush toilet – if bowl appears full, but continues to fill, valve may be overflowing bowl. Adjust water level as follows:
- A.** Fill bowl with gallon of water & wait for it to recede and stop.
 - B.** Mark water level with pencil and flush toilet. If the water refills above line, water level is too high, if water stops filling below pencil line, water is too low.
 - C.** Adjust water by pushing down and rolling the dial with thumb on roller clamp. "0" means no refill.



9 Code Compliance

- Once fill valve is installed, ensure overflow pipe and water level of tank are correctly set.
- 1. THE TOP OF OVERFLOW PIPE (A)** must be minimum of 1" below **TANK LEVER HOLE (B)**.
 - 2. WATER LEVEL (C)** is set below top of Overflow Pipe (Fluidmaster recommends 1/2").
 - 3. THE CRITICAL LEVEL MARK / C.L. Mark (D)** identified by C.L. on fill valve must be positioned 1" above top of overflow pipe. This is a requirement of the **Universal Plumbing Code.**



Code Compliance helps protect your home & drinking water supply.

TROUBLESHOOTING

IF FILL VALVE DOES NOT TURN ON, WILL NOT TURN OFF, OR WILL NOT REFILL THE TANK AFTER THE FLUSH

- 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 valve or in water supply line (See "REMOVING THE VALVE CAP ASSEMBLY & FLUSHING OUT DEBRIS").
- If fill valve has been in use for some time and/or float cup does not drop when flushing tank, replace seal with a genuine Fluidmaster 242 seal (See "IF REPLACING SEAL").

IF FILL VALVE TURNS ON AND OFF BY ITSELF

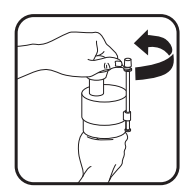
- This indicates the tank is losing water. The fill valve is refilling lost water. Clean flapper and drain seat. If leak continues change flush valve. Install Fluidmaster 507AKR, 540AKR or 555C kit.

IF WATER LEVEL IN BOWL IS TOO LOW

- Make sure the refill tube is supplying water down overflow pipe.
- Water level in tank may be too low. Raise water level to 1/2" below top of overflow pipe (See Step "7"). You may have to lengthen the fill valve in order to increase the water level in tank (See Step "3").
- Flapper may be closing too soon. Give flapper chain approximately 1/2" of slack (See Step "5").

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

Removing Valve Cap
Turn off water supply. Flush Toilet. Twist counter-clockwise to remove cap and disconnect from rod.



Flushing Out Debris
Hold cup upside down over uncapped valve to prevent splashing. Turn water supply on and off a few times. Turn water supply off when putting cap back on valve.



If Replacing Seal



If Replacing Seal: Use only a genuine Fluidmaster 242 seal.

Replacing Valve Cap
Connect cap to rod (a). If you have a 400 with a metal rod (c), place adapter (b) into slot at end of cap. Place cap on valve with rod next to refill tube (d). Push down and twist clockwise until it stops.

