

PARTS OVERVIEW

There are 5 main components included in this box. Each of these components are contained within color-coded bags with a corresponding letter.

To identify a part within the box, look for the letter and color on each bag that corresponds with the parts listed to the right.

PART
A



DUO FLUSH™ Valve
The DUO FLUSH™ Valve saves water by allowing you to choose between half and full flushes.

PART
B



Angled Seat Adapter
The ANGLED SEAT ADAPTER is only necessary if you have a plastic ANGLED FLUSH VALVE SEAT.

PART
C



Brass Seat Adapter
The BRASS SEAT ADAPTER is only necessary if you have a BRASS FLUSH VALVE SEAT.

PART
D



Dual Action Handle (Handle)
The DUAL ACTION HANDLE will allow you to flush UP for a half flush and DOWN for a full flush.

PART
E



PerforMAX™ Fill Valve
The PerforMAX™ Fill Valve maximizes system performance. It replaces the fill valve currently in your tank.

Fluidmaster®

DUO FLUSH™
System
INSTALLATION GUIDE



Visit www.duoflush.com for easy-to-follow installation videos and additional troubleshooting tips.

WARNING

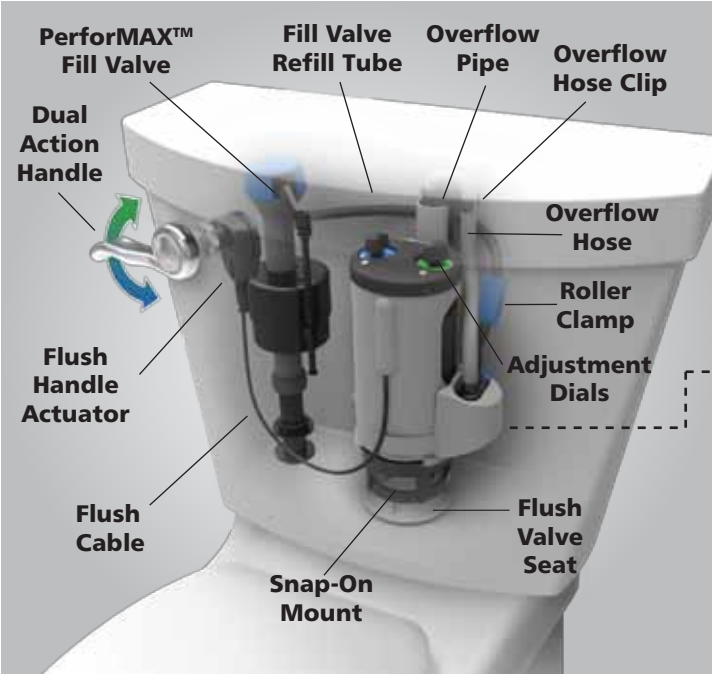


DO NOT USE IN-TANK DROP-IN TOILET BOWL CLEANERS. THESE PRODUCTS CAN DAMAGE THE FLUSH VALVE SEAT AND RESULT IN TOILET CLOGS, LEAKS, AND DAMAGE TO THE TOILET. CAUSE FLOODING AND PROPERTY DAMAGE AND MAY VOID FLUIDMASTER WARRANTY. DO NOT OVERTIGHTEN NUTS OR BOLTS. BOWL MAY CRACK.

Fluidmaster Inc.
30800 Rancho Viejo Rd.,
San Juan Capistrano, CA 92675
www.fluidmaster.com
800.631.2011

PART# 25-0173-1, Rev. 2, 09/11

DUO FLUSH™ VALVE OVERVIEW & PREPARATION



Items Needed

- Sponge or Towel
- Pliers (Optional)
- Pencil

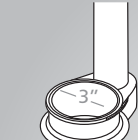


Water Saving Refill Module

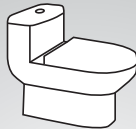
Fluidmaster's Patent-Pending Water Saving Refill Module boosts performance when combined with Fluidmaster's PerforMAX™ FILL VALVE 400ARHR.

INCOMPATIBILITIES

The systems and components shown here are not compatible with the Fluidmaster DUO FLUSH™ Valve.



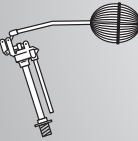
3" Flush Valves



Low-Boy (1-Piece) Toilets



Kohler Side-Mount Valves



Ballcock Fill Valves

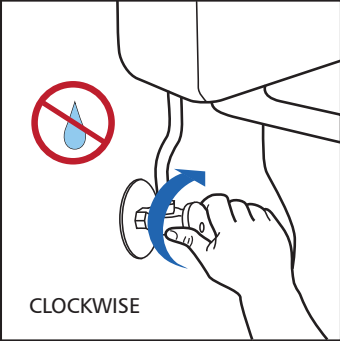
Can be replaced with Fluidmaster's PerforMAX™ FILL VALVE 400ARHR.



Mansfield Flush Valves

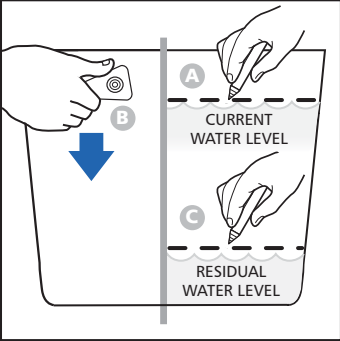
Requires installation of 2" flapper flush valve (not included). Can be replaced with Fluidmaster's 507 Flush Valve.

SHUT OFF WATER

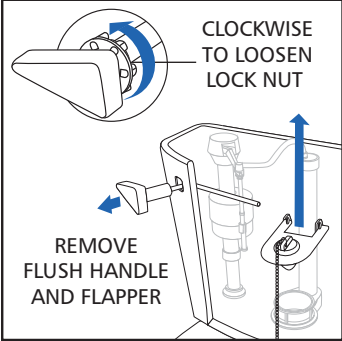


Step 1: Shut off the water supply beneath your toilet by turning the valve clockwise.

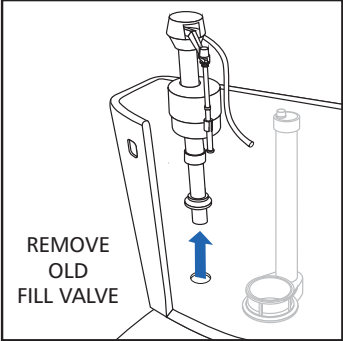
SECTION 1: MARKING WATER LEVELS & REMOVING OLD PARTS



Step 2: **A** Remove the tank lid. **B** Mark the current water level in your tank. Flush your toilet once. **C** Make a mark at the residual water level left inside the tank. Flush your toilet a second time to drain the water from the toilet tank. If necessary, sponge out any remaining water.



Step 3: Remove the existing flapper, chain and flush handle assembly from your tank. When removing the FLUSH HANDLE, note that the LOCK NUT may be reverse-threaded, so you need to turn it clockwise to loosen it.



Step 4: Remove the old fill valve assembly.

IDENTIFYING YOUR FLUSH VALVE SEAT



FLAT SEAT



ANGLED SEAT



BRASS SEAT

Step 5A: Identify the type of FLUSH VALVE SEAT you have in your tank. If your plastic OVERFLOW PIPE has a FLAT SEAT as pictured above, proceed to Section 4 on the back side of this instruction guide.

Step 5B: If your plastic OVERFLOW PIPE has an ANGLED SEAT, locate and remove the ANGLED SEAT ADAPTER from the yellow bag labeled "B." Follow the installation instructions below for SECTION 2.

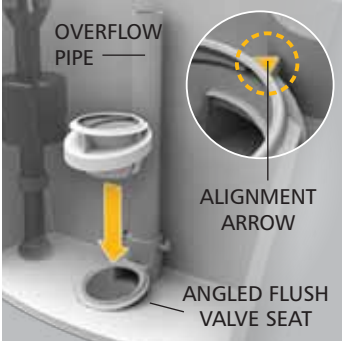
Step 5C: If your OVERFLOW PIPE is brass, locate and remove the BRASS SEAT ADAPTER from the orange labeled "C." Follow the installation instructions below for SECTION 3.

SECTION 2: INSTALLING THE ANGLED SEAT ADAPTER



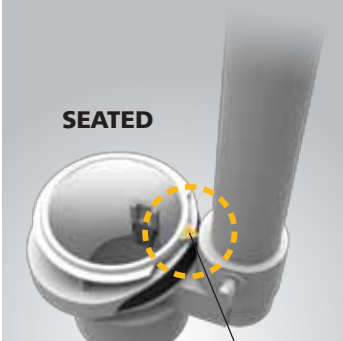
Step 6: Prior to installing the ANGLED SEAT ADAPTER make sure the bottom of the tank and flush valve seat are dry.

Step 7: Remove paper from sealant ring located on the bottom of the ANGLED SEAT ADAPTER. Do not remove SEALANT RING.



Step 8: Locate yellow arrow on the back of the ANGLED SEAT ADAPTER.

Step 9: Align yellow arrow on ANGLED SEAT ADAPTER directly toward the plastic OVERFLOW PIPE.



SEATED

Step 10: Firmly press the ANGLED SEAT ADAPTER onto the flush valve seat as shown above.

Proceed to Section 4.

SECTION 3: INSTALLING THE BRASS SEAT ADAPTER



SEAT SURFACE MUST BE FLAT

Step 11: Check for flat surface on seat. Any damage to seat will require replacement of the entire brass seat with Fluidmaster's 507 Flush Valve.



Step 12: Wipe down the BRASS FLUSH VALVE SEAT before installing to check for mineral build-up. If the OVERFLOW PIPE is threaded on (some are, some aren't) make sure it's tight by twisting clockwise before installing the BRASS SEAT ADAPTER.



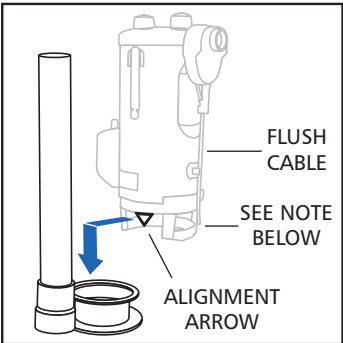
SEATED

Step 13: Slide the BRASS SEAT ADAPTER down the pipe and snap it to the FLUSH VALVE SEAT as shown.

Proceed to Section 4.

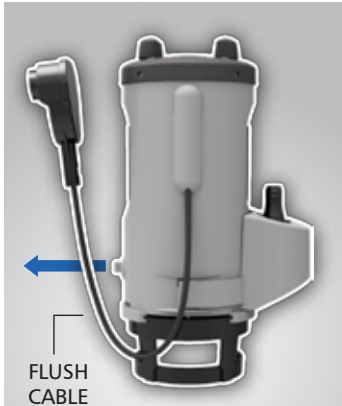
PROCEED TO INSIDE PAGES FOR NEXT STEPS

SECTION 4: INSTALLING THE DUO FLUSH™ VALVE



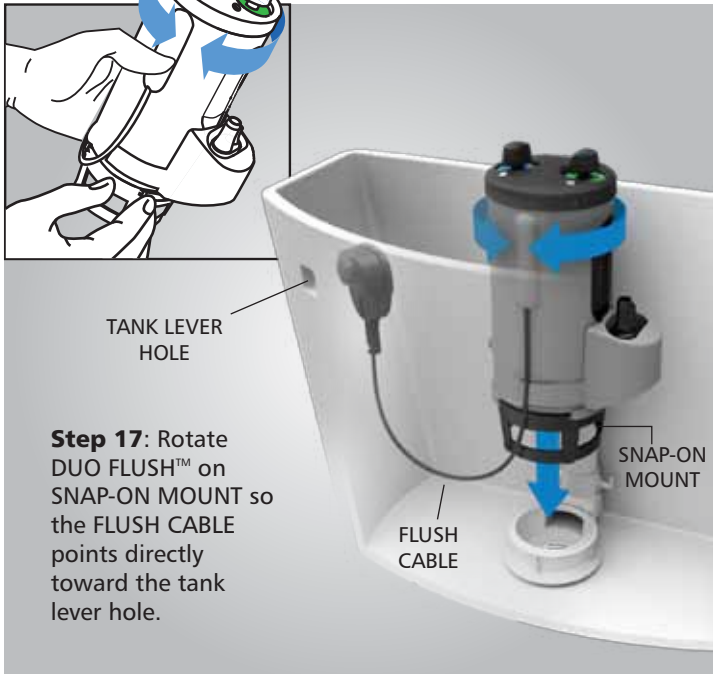
Step 14: Remove foam around ADJUSTMENT DIALS.

Step 15: Locate white arrow on SNAP-ON MOUNT and align it facing the OVERFLOW PIPE. Do not install yet.

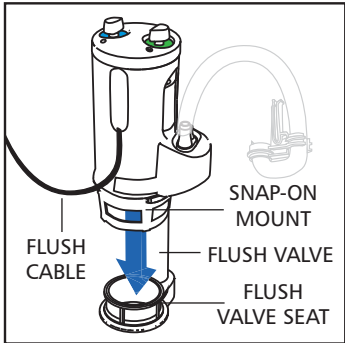


Step 16: Unsnap FLUSH CABLE from DUO FLUSH™.

Note: Make sure not to sharply bend or kink the FLUSH CABLE.

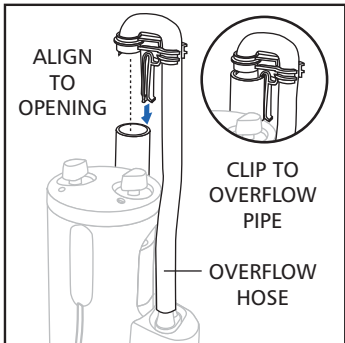


Step 17: Rotate DUO FLUSH™ on SNAP-ON MOUNT so the FLUSH CABLE points directly toward the tank lever hole.



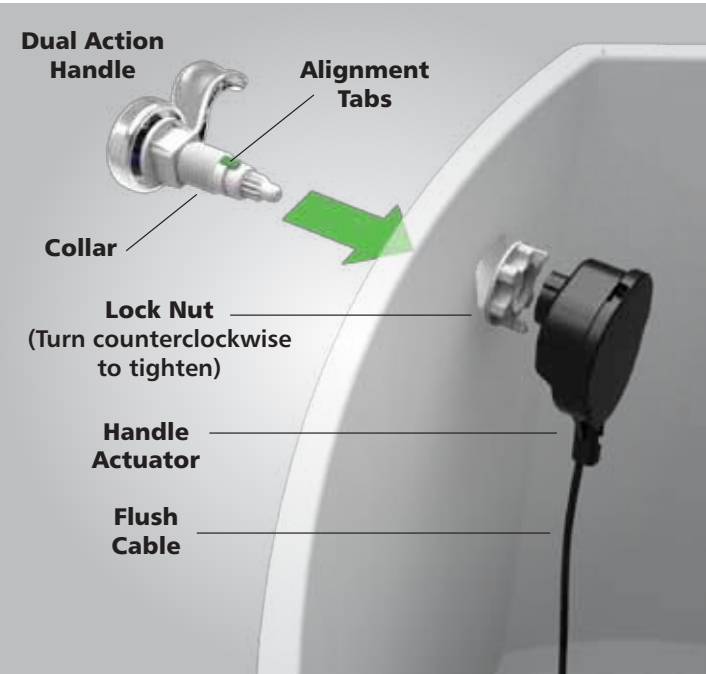
Step 18: Press DUO FLUSH onto seat.

Note: Be sure the FLUSH CABLE is not caught between the SNAP-ON MOUNT and the FLUSH VALVE SEAT when installing.



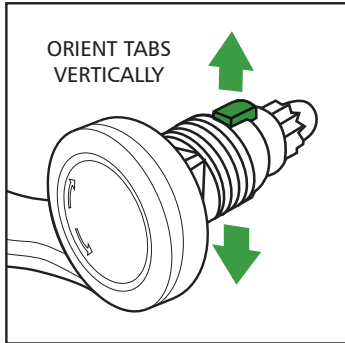
Step 19: Attach the OVERFLOW HOSE to the top of the OVERFLOW PIPE via the black plastic OVERFLOW HOSE CLIP. Ensure that the opening of the OVERFLOW HOSE is directly aligned with the opening of the OVERFLOW PIPE.

SECTION 5: INSTALLING THE DUAL ACTION HANDLE

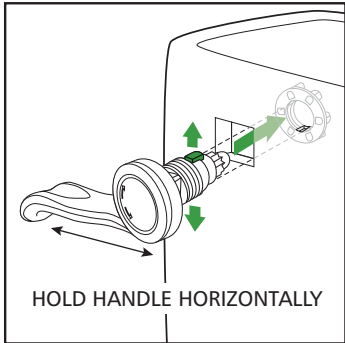


Step 20: Remove the HANDLE from the green bag labeled D.

Step 21: Unthread LOCK NUT in a clockwise rotation on HANDLE.



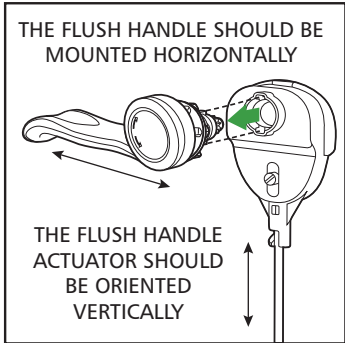
Step 22: Rotate handle COLLAR so alignment tabs are positioned vertically.



Step 23: Insert the HANDLE into toilet hole.

Step 24: Install nut counter-clockwise to tighten.

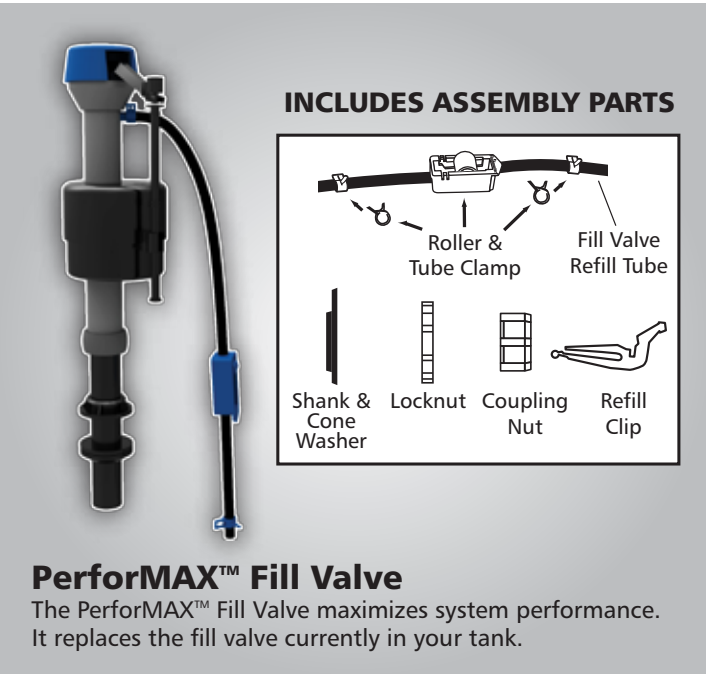
Step 25: Ensure that the HANDLE is positioned horizontally by holding handle horizontally before snapping into place into tank.



Step 26: Attach HANDLE ACTUATOR to the handle COLLAR on HANDLE. If necessary, rotate DUO FLUSH™ on SNAP-ON MOUNT so the FLUSH CABLE angles toward the tank lever hole.

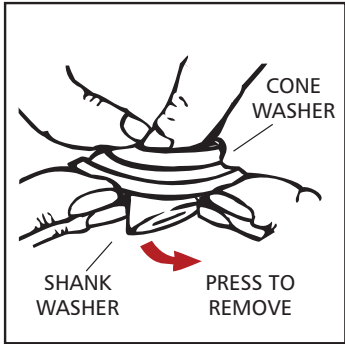
Step 27: Turn water on to fill tank.

SECTION 6: INSTALLING THE PerforMAX™ FILL VALVE

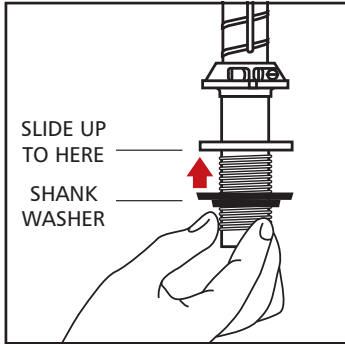


PerforMAX™ Fill Valve

The PerforMAX™ Fill Valve maximizes system performance. It replaces the fill valve currently in your tank.

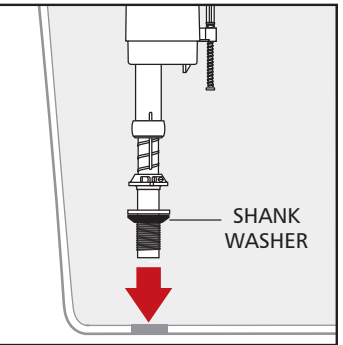


Step 28: Disassemble small parts from red bag labeled "PerforMAX" Fill Valve." Locate the shank washer and separate the cone washer from its center. Press to remove the cone washer from the center of the shank washer as shown above.

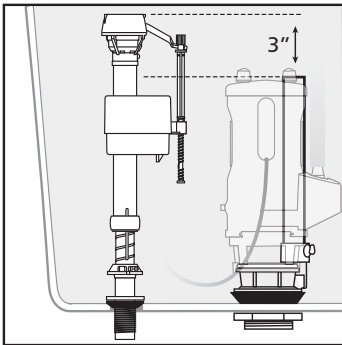


Step 29: Place the SHANK WASHER on the FILL VALVE SHANK (oriented with the tapered side down as shown) and slide it up to be flush with the SHANK STOP.

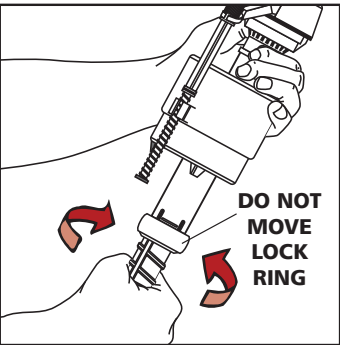
SECTION 7: ADJUSTING THE HEIGHT OF THE PerforMAX™ FILL VALVE



Step 30: Place the FILL VALVE in the tank to check height. Do not attach yet.

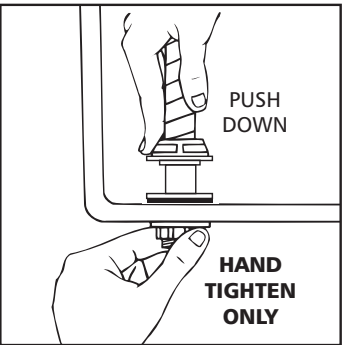


Step 31: Check the height of the PerforMAX™ FILL VALVE. It must be 3" higher than the OVERFLOW TUBE.

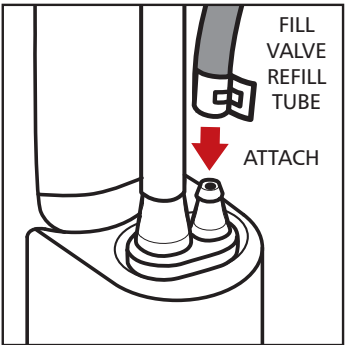


Step 32: Adjust height of FILL VALVE by turning lower shank in or out of valve body. **DO NOT MOVE LOCK RING.**

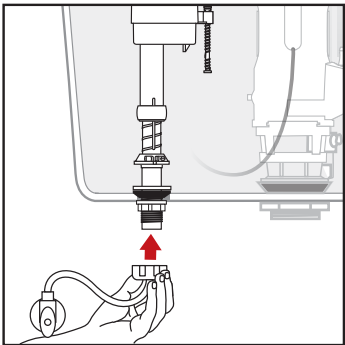
SECTION 8: INSTALLING AND CONNECTING THE PerforMAX™ FILL VALVE



Step 33: Place the PerforMAX™ FILL VALVE in the tank. Fasten the LOCK NUT to the FILL VALVE THREADED SHANK. **Hand tighten. (Do not overtighten.)**



Step 34: Attach the free end of the black FILL VALVE REFILL TUBE from the PerforMAX™ FILL VALVE to the small nipple on the WATER SAVING REFILL MODULE. Ensure the HOSE CLAMP is secure.



Step 35: Identify your water supply line by using steps 36A - 36E to determine the assembly parts required to properly reconnect the water supply line.

PROCEED TO FOLLOWING PAGE FOR NEXT STEPS

SECTION 9: RECONNECTING THE WATER SUPPLY: CONNECTION TYPES



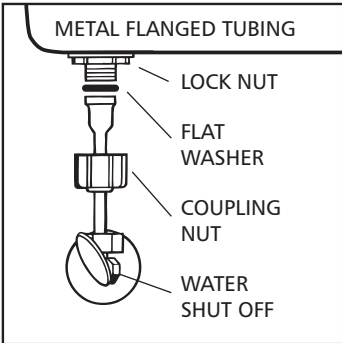
Warning

Plastic nut. HAND TIGHTEN ONLY. DO NOT over-tighten.

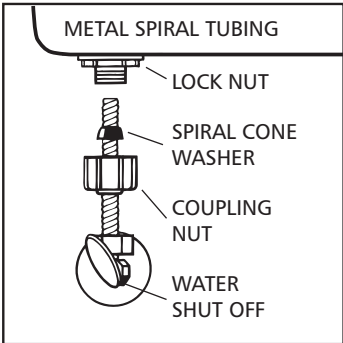
DO NOT use plumber’s putty to seal fittings (The use of Teflon tape is optional).

DO NOT use thread lubricants.

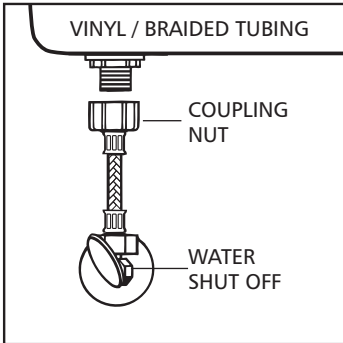
Use of thread sealants or lubricants can damage plastic nut and result in flooding and property damage.



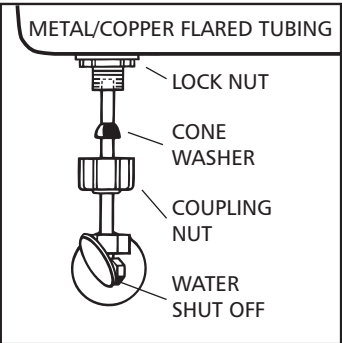
Step 36A: If your water supply line has METAL FLANGED TUBING as shown above, use existing hardware to reconnect the water supply as indicated.



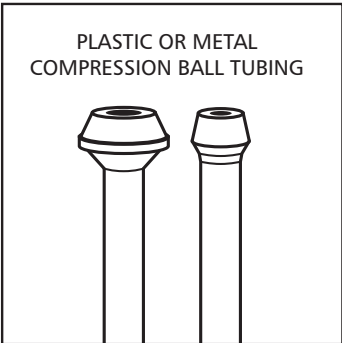
Step 36B: If your water supply line has METAL SPIRAL TUBING as shown above, use existing hardware to reconnect the water supply as indicated.



Step 36C: If your water supply line has VINYL OR BRAIDED TUBING as shown above, use existing hardware to reconnect the water supply as indicated.

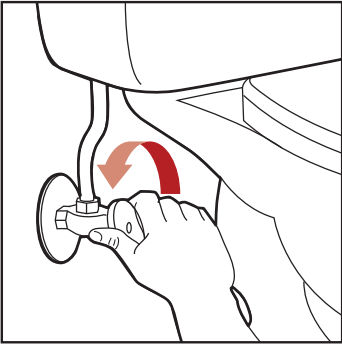


Step 36D: If your water supply line has metal/copper flared tubing, use the included Fluidmaster coupling nut and cone washer to replace existing hardware. The water supply tube must extend 1/2-inch inside the threaded FILL VALVE SHANK.

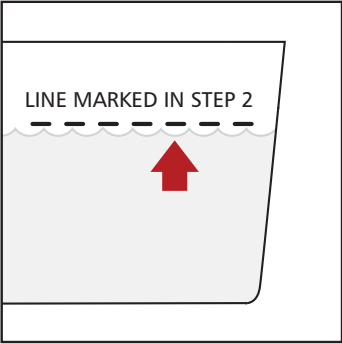


Step 36E: If your water supply line has plastic or metal compression ball tubing, do not use Fluidmaster’s coupling nut and the cone washer on this type of plastic or metal tubing shown above.

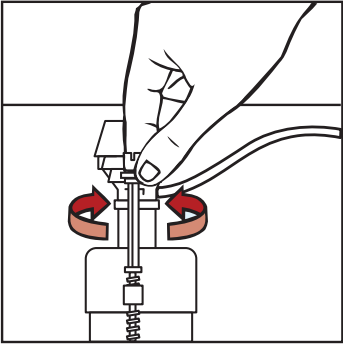
SECTION 10: ADJUSTING THE PerforMAX™ FILL VALVE



Step 37: Once connected, turn on the water supply and check for leaks.



Step 38: Compare the water level after the tank has filled with the existing water level line you marked in Step 2.



Step 39: Turn the ADJUSTMENT SCREW clockwise to increase water level, and counter-clockwise to decrease water level until you’re back at the mark.

SECTION 11: WATER LEVEL ADJUSTMENT: HALF FLUSH



Step 40: Ensure that the half flush and full flush are both set to MAX settings before you start adjusting your settings. To adjust the settings, push the knob down and turn.

Step 41: THE ADJUSTMENT DIAL with GREEN DISC (look for the ● symbol) controls your half flush. Press down and turn to “MAX” to start.

A. Drop 3 pieces of toilet paper into the bowl and ROTATE the HANDLE upward (half flush). If the flush is successful, adjust the setting to the next lower numbered setting. Repeat step A.

B. Continue to adjust the setting to the next lowest number until the flush is not successful.

C. Adjust your setting back to the last successful flush setting that provided you with a successful flush.

SECTION 12: WATER LEVEL ADJUSTMENT: FULL FLUSH



Step 42: The ADJUSTMENT DIAL with BLUE DISC (look for the ○ symbol) controls your full flush.

A. Start the full flush dial 1 setting higher than the half flush setting.

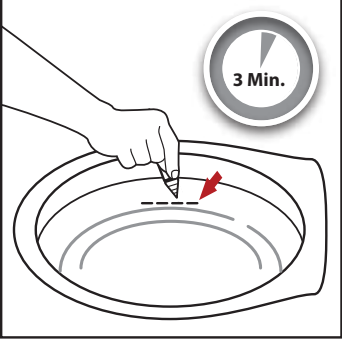
B. Drop 3 pieces of toilet paper into the bowl and ROTATE the HANDLE downward (full flush). If the flush is successful keep setting as is.

C. If the contents in your toilet bowl do not successfully flush down after use, adjust setting up to the next highest number. Repeat step B.

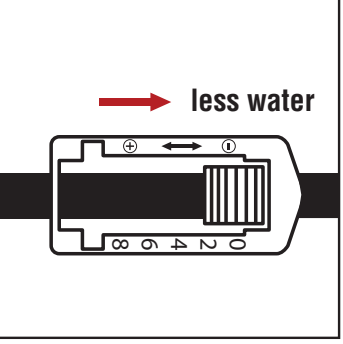
SECTION 13: CHECK WATER LEVEL IN THE BOWL



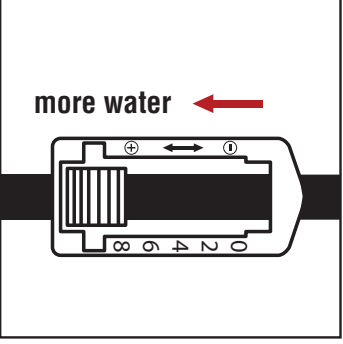
Step 43: Start by adding a gallon of water to the existing bowl water.



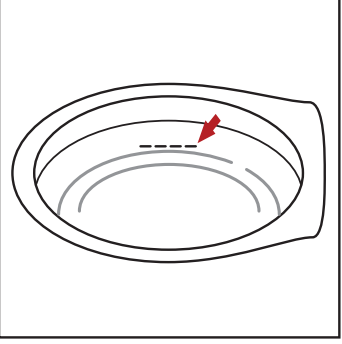
Step 44: Wait 3 minutes, allowing the water to settle and mark the water level.



Step 45: Flush the toilet. If the water reaches your mark in the bowl and the FILL VALVE is still running, push down on the roller and adjust it to the next lowest number.



Step 46: If the FILL VALVE shuts off before the water has reached your mark in the bowl, push down on the roller and adjust it to the next highest number.



Step 47: Repeat steps in SECTION 11 and SECTION 12 until the water reaches your mark at the same time the FILL VALVE stops running.

DUO FLUSH™ TROUBLESHOOTING

1. Tank Lid Interference on Half (Upward) Flush

Problem: Tank lever hits tank lid forcing the user to hold the handle

Solution: Remove handle actuator by holding the top end of actuator and pull away from dual action handle collar. DO NOT pull on FLUSH CABLE when removing the handle actuator.



Rotate handle downward 15° and reinsert actuator into handle.

If tank lever does not fit properly on your toilet tank, for further help visit www.duoflush.com or call Fluidmaster Technical Support at (800) 631-2011) M-F 7:30 am – 4:30 pm PST.

2. Seal Leaking

Problem: The tank continues to leak water causing water loss in the tank.

Solution: First remove the handle actuator by holding the top end of the actuator and pull away from dual action handle collar. Grab the top of the DUO FLUSH™ and gently rock (away from fill valve) and pull up on DUO FLUSH™.



Once released clean seat and inspect piston seal at bottom ensuring the seal is centered on piston. Reattach DUO FLUSH™ and handle actuator. Turn on water and recheck water level for leaking.

3. Water Level in Bowl is Low

Problem: Toilet bowl water level is not filling up high enough even after adjusting both adjustment dials on DUO FLUSH™.

Solution: If adjustments made per Sections 11 & 12 still do not allow for adequate water levels in your bowl (even after several attempts), follow steps A through G below:

- A.** Unclip OVERFLOW HOSE CLIP from OVERFLOW PIPE
- B.** Remove OVERFLOW HOSE from WATER SAVING REFILL MODULE nipple.
- C.** Locate FILL VALVE REFILL CLIP from fill valve assembly parts in RED BAG labeled E
- D.** Attach FILL VALVE REFILL CLIP to end of FILL VALVE REFILL TUBE
- E.** Connect FILL VALVE REFILL TUBE with clip directly to top of the OVERFLOW PIPE.
- F.** Slide HOSE CLAMP to end of FILL VALVE REFILL TUBE to hold in place.
- G.** Retry flush.

DUO FLUSH™ TROUBLESHOOTING (continued)

4. Unused Parts

Problem: Why do I have parts left over from my kit?

Solution: Depending on the type of flush valve you have identified, you may have additional parts left which may include an angled seat adaptor, brass seat adaptor, and extra fill valve assembly parts.

For further help visit www.duoflush.com or call Fluidmaster Technical Support at (800) 631-2011) M-F 7:30 am – 4:30 pm PST.

5. Half flush will not adequately remove waste

Move the HALF FLUSH ADJUSTMENT DIAL (Green) to a higher number to allow more water to be flushed.

6. Full flush will not adequately remove waste

Move the FULL FLUSH ADJUSTMENT DIAL (Blue) to a higher number to allow more water to be flushed.

7. Angled Seat Adapter Removal

If you need to remove the ANGLED SEAT ADAPTER from your system, pull the adapter upward firmly to release it from the FLUSH VALVE SEAT. For further assistance, call Fluidmaster Technical Support at (800) 631-2011 M-F 7:30 am - 4:30 pm PST.

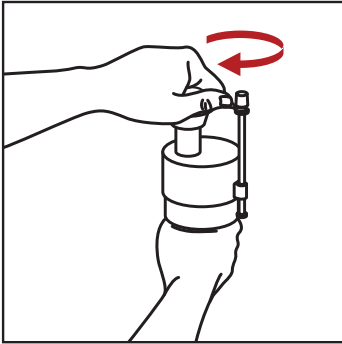
More Information

Please visit our website at www.fluidmaster.com for more solutions to common toilet problems.

PerforMAX™ FILL VALVE TROUBLESHOOTING: FLUSHING OUT DEBRIS

Problem: The PerforMAX™ Fill Valve will not turn off.

Solution: Sand and rust move through water pipes. Always clear debris from water lines. Refer to the following steps for “Flushing Out Debris.”

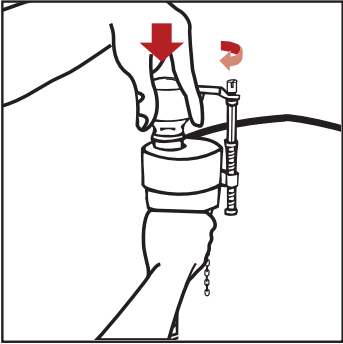


Step 1: Turn off water and flush toilet.

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 1/8th of a turn to unlock. Let cap assembly hang on float cup



Step 2: 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.



Step 3: REPLACING VALVE CAP ASSEMBLY
A.) Place cap assembly on top of valve body by aligning cap arm and adjustment rod next to refill hose).
B.) Press down on top cap rotating top & arm clockwise to locked position.

5 YEAR LIMITED 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.