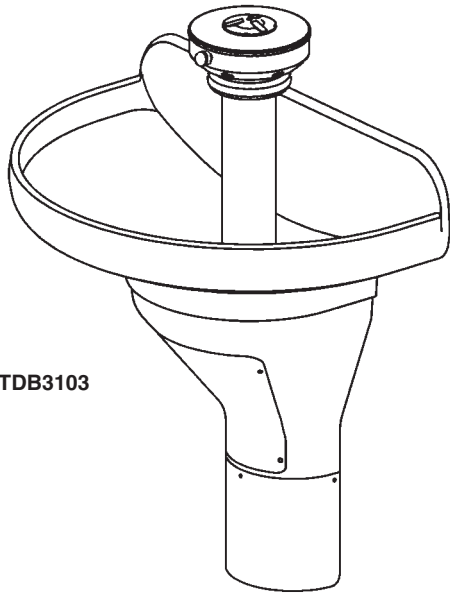


Installation

TDB3103

Terreon® 36" Semi-circular Deep Bowl Washfountain with TouchTime® Control

TDB3103



WF3203

Terreon Extra Height 36" Semi-Circular Classic Washfountain with 9" Deep Bowl and TouchTime Control

WF3203

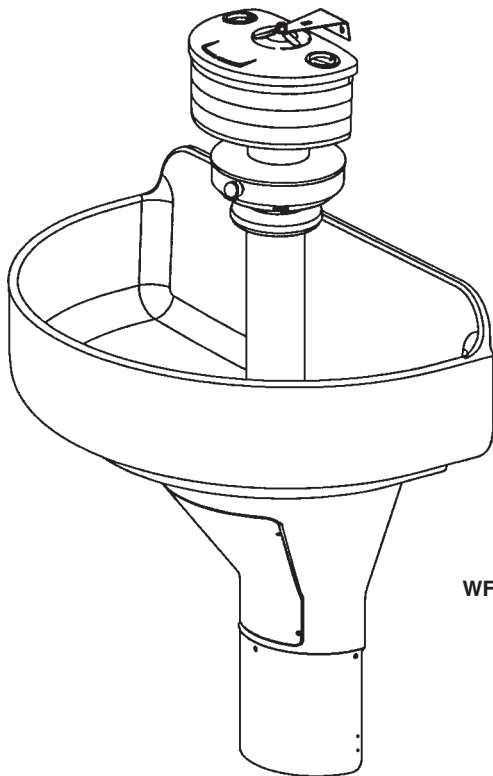
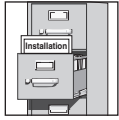


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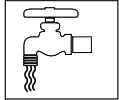
IMPORTANT!



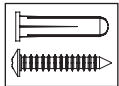
Read this entire installation manual to ensure proper installation. When finished with the installation, file this manual with the owner or maintenance department.



Separate parts from packaging and make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not begin installation until you obtain the missing parts.



Make sure that all water supply lines have been flushed and then completely turned off before beginning installation. Debris in supply lines can cause valves to malfunction.



Hardware supplied by installer must be appropriate for wall construction. Wall anchors used must have a minimum pull-out rating of 1,000 lbs.



Product warranties may be found under "Product" on our web site at www.bradleycorp.com.

Supplies Required by Installer

- (4) 1/2" lag bolts, screws or other fasteners to anchor washfountain pedestal
- 1/2" nominal copper tubing for hot and cold water supply lines.
- Standard P-trap
- 1-1/2" drain lines and fittings
- Teflon tape or pipe dope
- 110 VAC GFI power source for 110/24 VAC UL Class II transformer supplied
- OPTIONAL: Bradley recommends installing an electrical cutoff switch to the unit. This feature allows no accidental water delivery during regular maintenance and service.

Pre-Installation Information

Terreon Material

The Washfountain is constructed of Terreon®, a densified solid surface material composed of polyester resin. Terreon is resistant to chemicals, stains, burns and impact. Surface damage can be easily repaired with everyday cleaners or fine-grit abrasives. Terreon is NAHB certified to meet ANSI Z124.3, Z124.6 and ANSI/ICPA SS-1-2001.

TouchTime Control

Each Touchtime pushbutton activates a flow of water. Each nozzle is controlled by a separate solenoid valve, allowing each user to activate a flow of tempered water from one spray nozzle with a pushbutton for 15 seconds. Each valve uses less than half the maximum amount of hot water allowed by the ANSI/ASHRAE/IES 90A-1980 Standard.

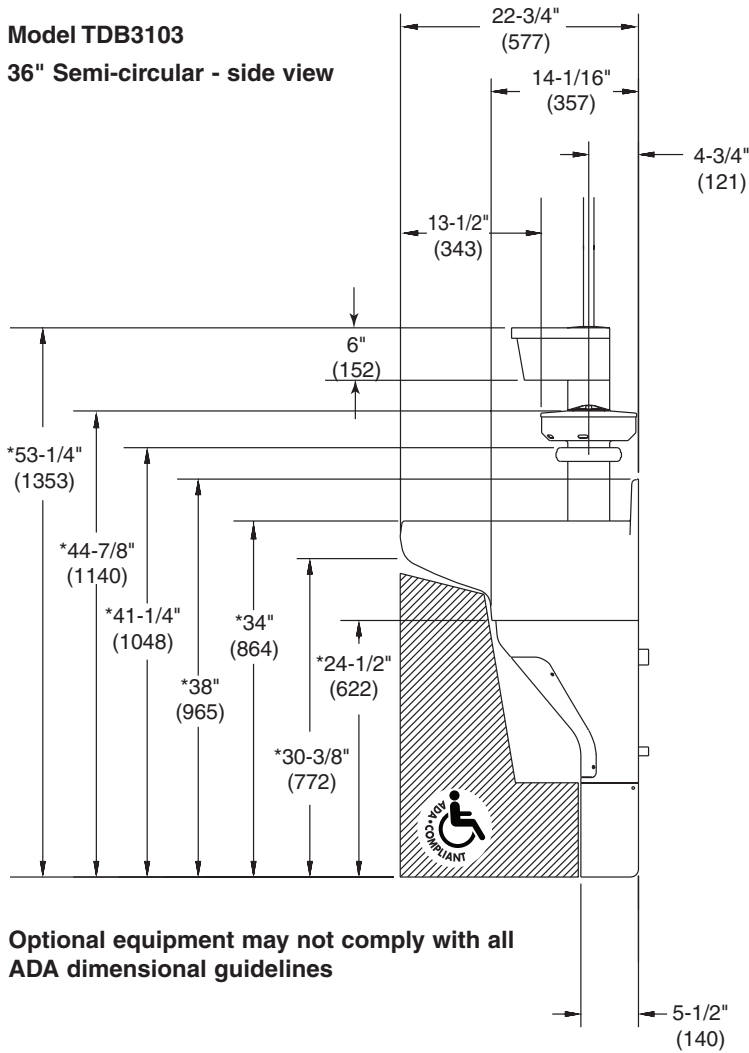
Solenoid Valve

An electronically controlled solenoid valve serves as the metering mechanism. Few moving parts provide reliable metering performance and the solenoid is unaffected by chemicals and minerals often present in municipal water supplies.

Semi-Circular Washfountain Dimensions

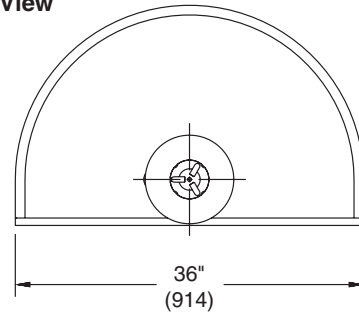
Model TDB3103

36" Semi-circular - side view

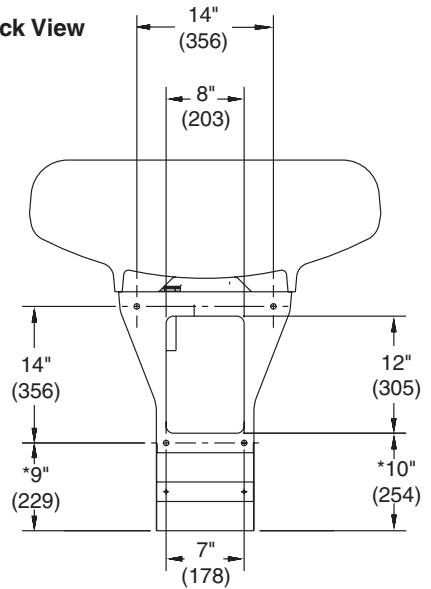


Optional equipment may not comply with all ADA dimensional guidelines

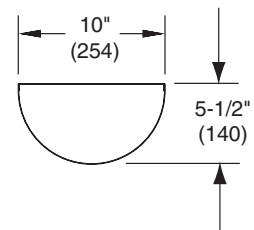
Top View



Back View



Bottom View



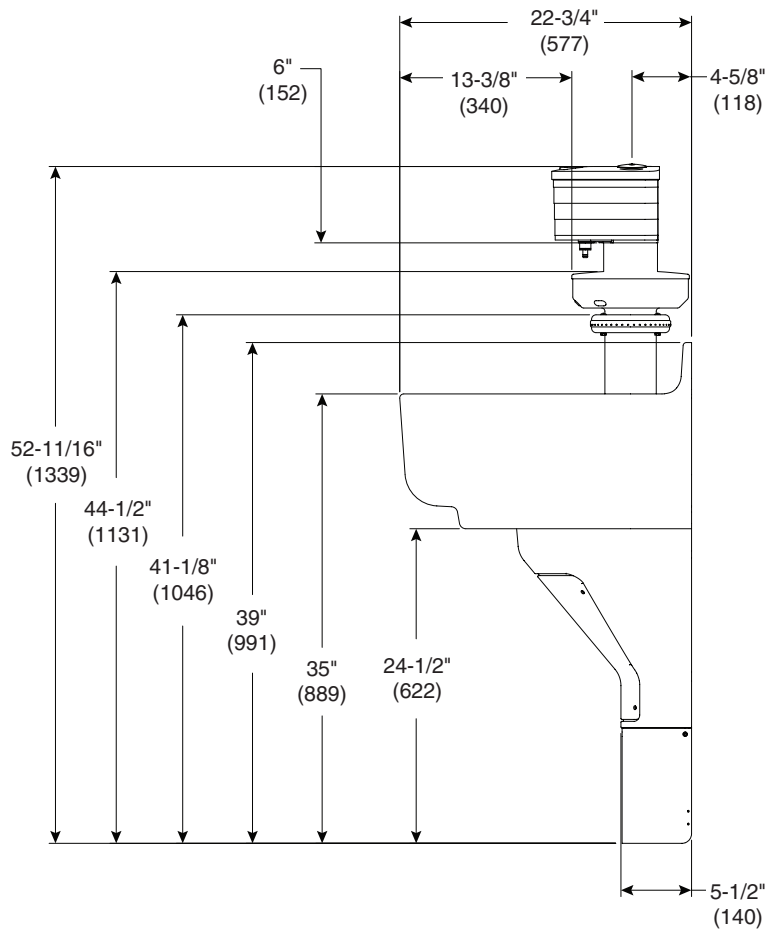
***Adjustments to Vertical Dimensions for Various Rim Heights**

| Rim Height | Application | Adjustment |
|------------|---|----------------|
| 34" | Adult Height ADA, TAS Adult Height | None, as shown |
| 32" | TAS Ages 11 thru 14 or 15, Grades 6 thru 8 or 9 | Subtract 2" |
| 30" | TAS Ages 4 thru 10 or 11, Grades 6 thru 8 or 9 & Proposed Juvenile Height ADA | Subtract 4" |

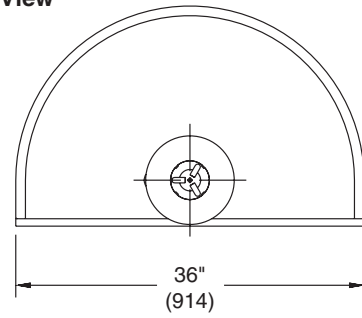
Semi-Circular Washfountain Dimensions

Model WF3203

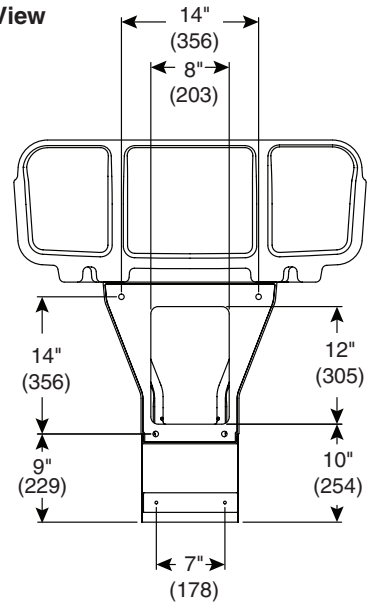
36" Semi-circular - side view



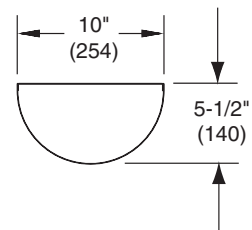
Top View



Back View

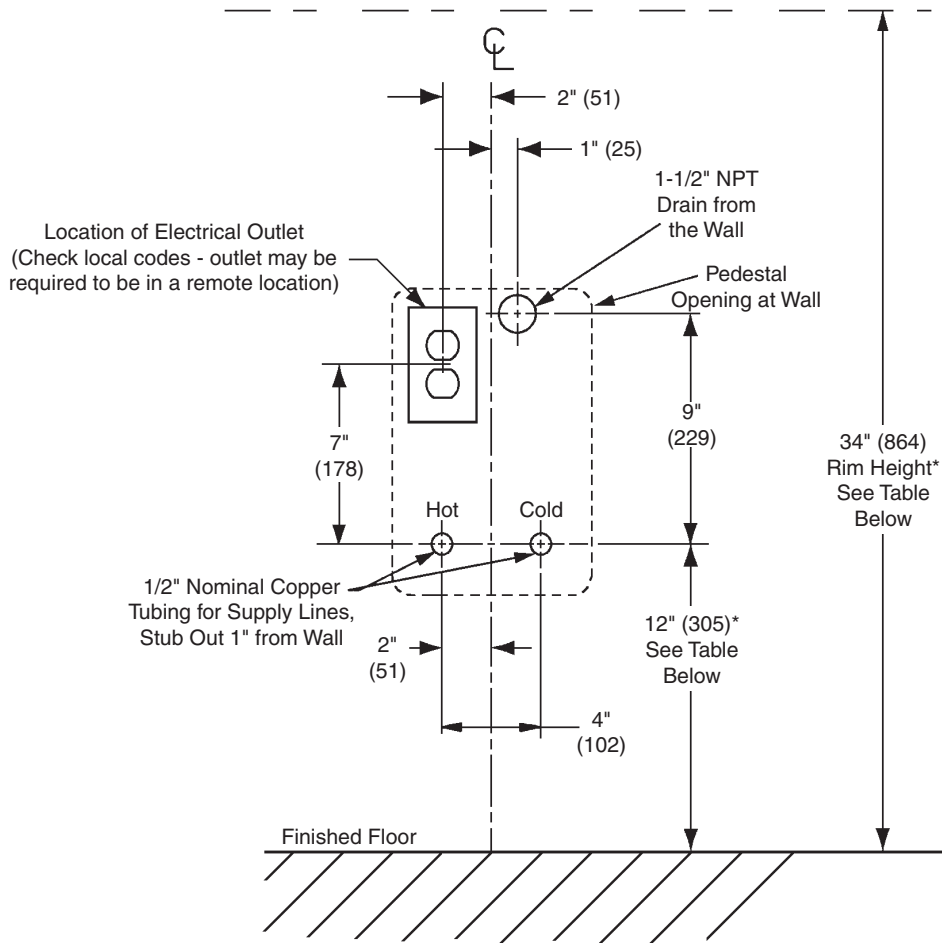


Bottom View



Semi-Circular Washfountain Rough-Ins

(mm)



***Adjustments to Vertical Dimensions for Various Rim Heights**

| Rim Height | Application | Adjustment |
|---------------------|---|----------------|
| 34" 35" (WF3203) | Adult Height ADA, TAS Adult Height | None, as shown |
| 32" | TAS Ages 11 thru 14 or 15, Grades 6 thru 8 or 9 | Subtract 2" |
| 30" | TAS Ages 4 thru 10 or 11, Grades Pre-K thru 5 or 6 & Proposed Juvenile Height ADA | Subtract 4" |

Rough-In Specifications

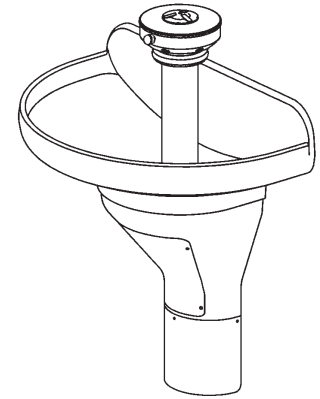
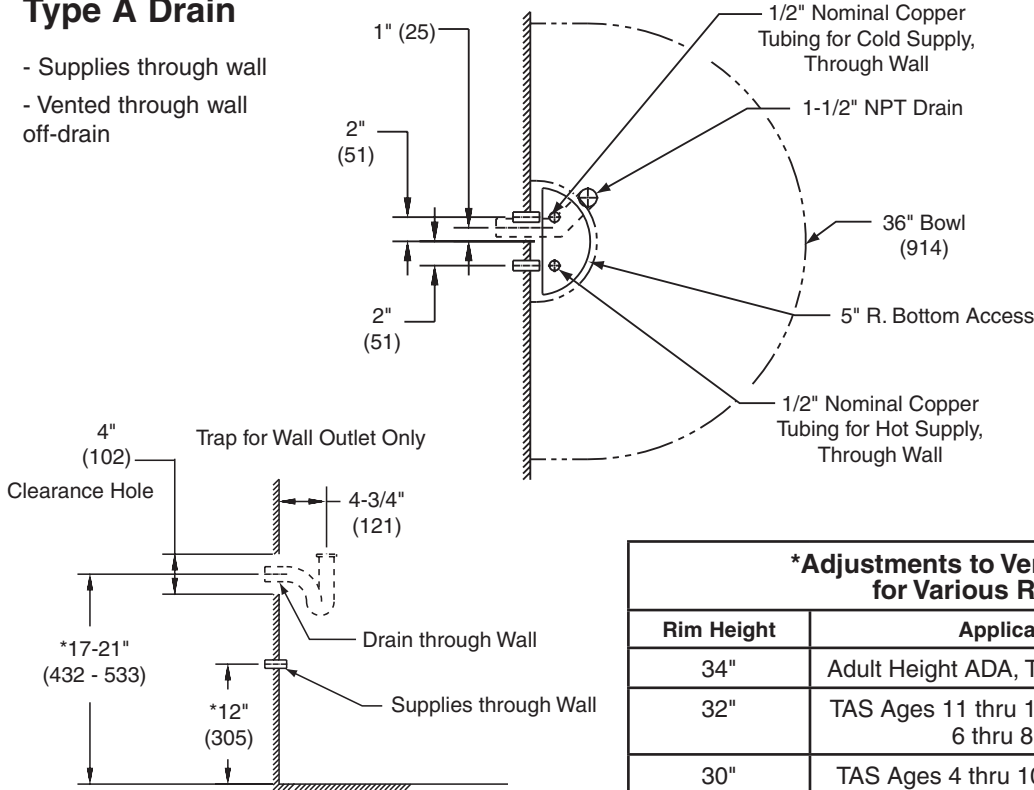


Drain P-Trap and supplies by others.

(mm)

Type A Drain

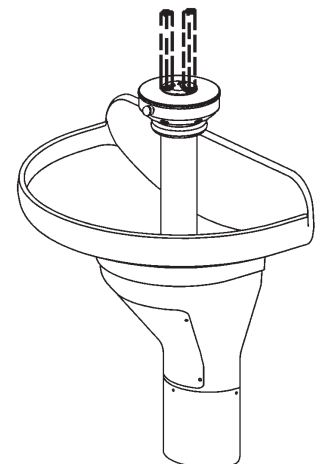
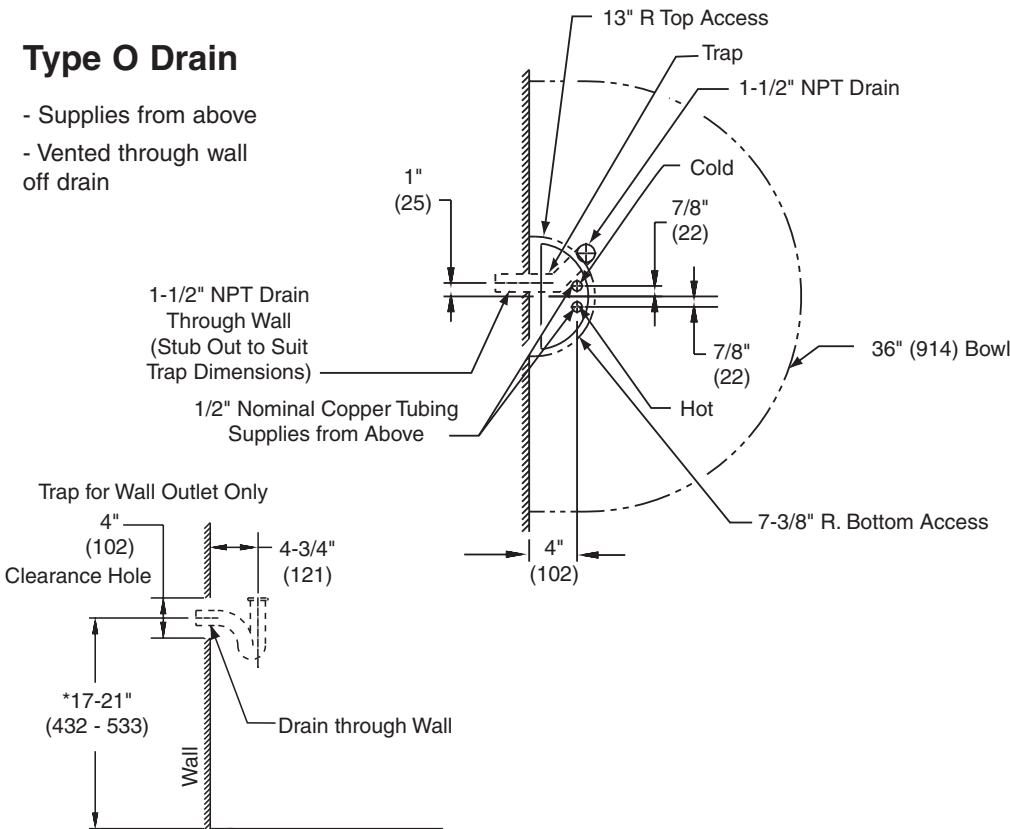
- Supplies through wall
- Vented through wall off-drain



| *Adjustments to Vertical Dimensions for Various Rim Heights | | |
|---|---|----------------|
| Rim Height | Application | Adjustment |
| 34" | Adult Height ADA, TAS Adult Height | None, as shown |
| 32" | TAS Ages 11 thru 14 or 15, Grades 6 thru 8 or 9 | Subtract 2" |
| 30" | TAS Ages 4 thru 10 or 11, Grades Pre-K thru 5 or 6 & Proposed Juvenile Height ADA | Subtract 4" |

Type O Drain

- Supplies from above
- Vented through wall off drain



1 Rough-in Drain and Supplies

A Rough in supply and drain piping as required for your installation.

2 Bowl/Pedestal Mounting and Assembly

A Attach the stainless steel pedestal base to the pedestal using supplied screws and finishing washers.

B Position the pedestal at the desired location and mark the position of the (4) pedestal wall mounting locations.

C Secure pedestal to wall with suitable fasteners, 1/2" anchors and 1/2" bolts (supplied by installer).

D Using two people, carefully lift bowl onto pedestal.

E Position the bowl so that the threaded rods in the bowl mate with the slotted holes in the pedestal.

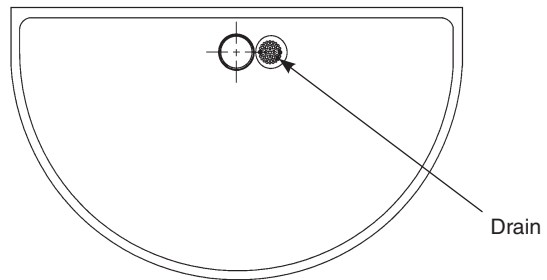
F Using 1/4" wing nuts and washers, secure the bowl to the pedestal, three places.



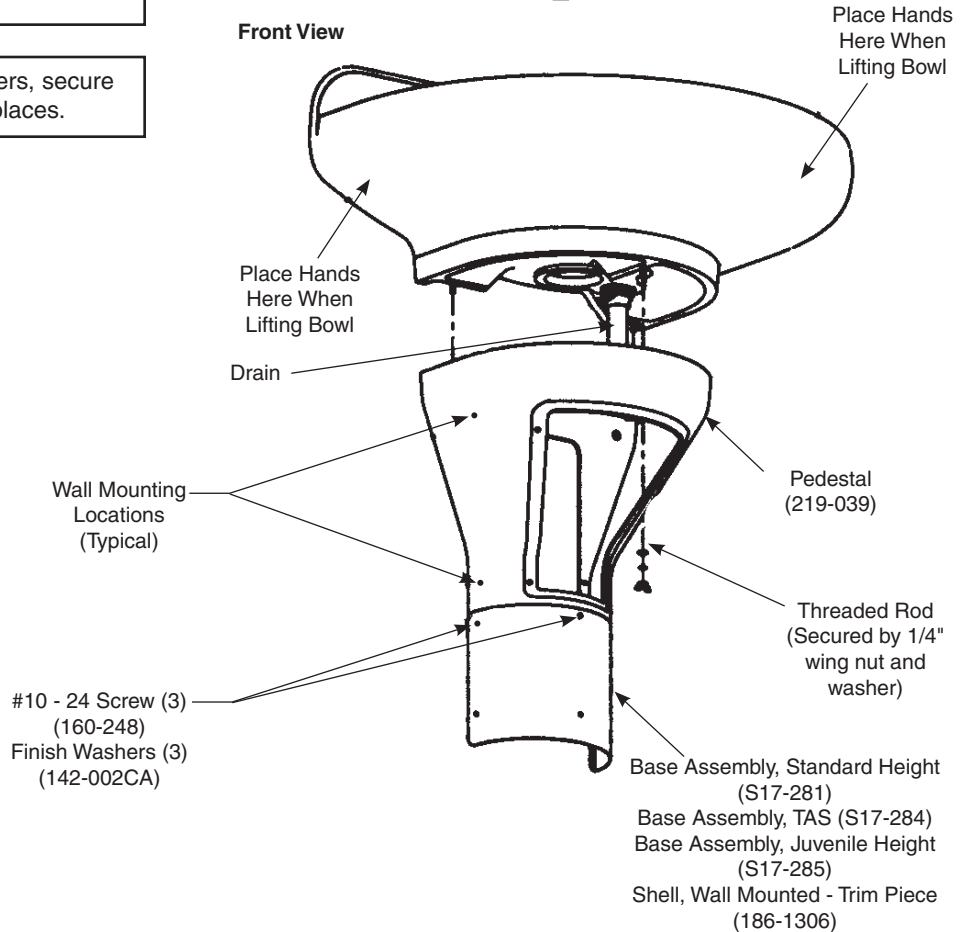
Before attaching 1/4" wing nuts and washer to threaded rod, remove red protective caps from threaded rods. Discard sleeve caps after removal.

CAUTION! Bowl surface is very smooth. Approximate weight of bowl is 75 pounds. Handle with Care!

Top View



Front View

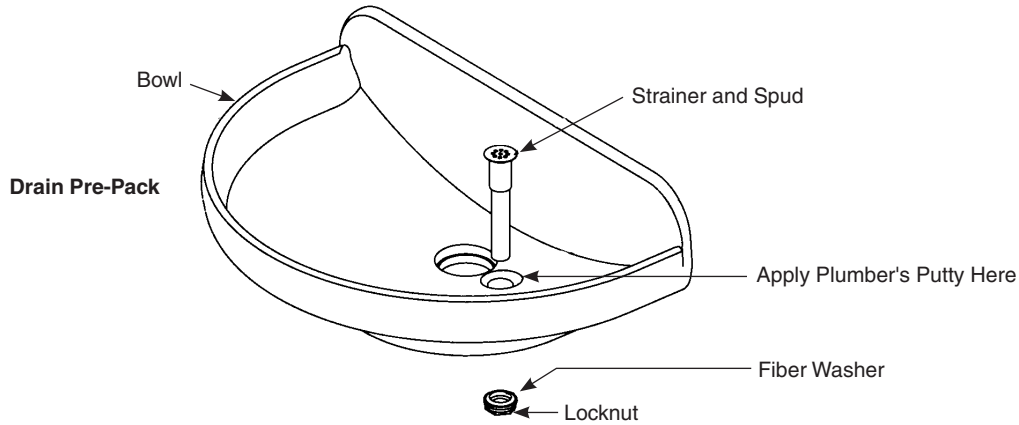


3 Installing Drain Spud in Bowl

A Secure drain spud with lock nut and washers.



Seal between drain spud and drain hole with plumber's putty (supplied by installer).



4 Connect Supply Stops, Sprayhead Supply Tubing and P-Trap

A Connect supply stops onto stub-outs.



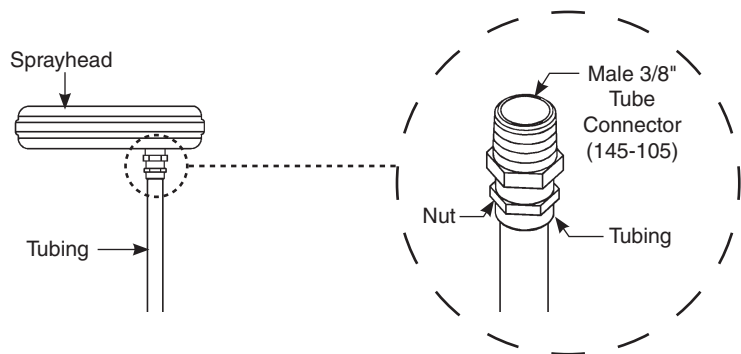
Flush supply lines before making connections. Do not use pipe sealant on compression fittings.

B Using a sharp knife, cut tubing squarely and remove any burrs. Do not pinch or crush end of tubing.

C Loosen nut on fitting. Moisten end of tube and push into fitting until it is firmly seated. Tighten nut to secure tube to fitting (make sure nut is securely tightened).

D If connector leaks, reseal tubing. If leaking persists, replace the male connector, or call your Bradley representative for assistance.

E Connect p-trap (supplied by installer) to tailpiece and drain outlet.



5 Sprayhead, TouchTime Module and Thermostatic Mixing Valve Installation

A Install hemmed end (not sharp end) of support tube with gasket onto bowl.

B Place sprayhead with 3/8" tubing onto support tube. Run the tubing down through the support tube. Make sure the spray holes point away from the wall.

C Place the upper tie bar (notched at both corners of each end) on top of sprayhead parallel to wall. Connect the two threaded tie rods together using the coupling nut with hex head set screws. Run the tie rod down through upper tie bar and secure from underneath the bowl using the lower tie bar (no notches) and hex nut with socket head set screw. A minimum of 2-1/4" of threaded tie rod should protrude below the lower tie bar; this will be required to attach the valving.

D Place the TouchTime module assembly on top of sprayhead. Rotate until actuator locks in with tie bar. Drop TouchTime module wires down to the valve assembly.



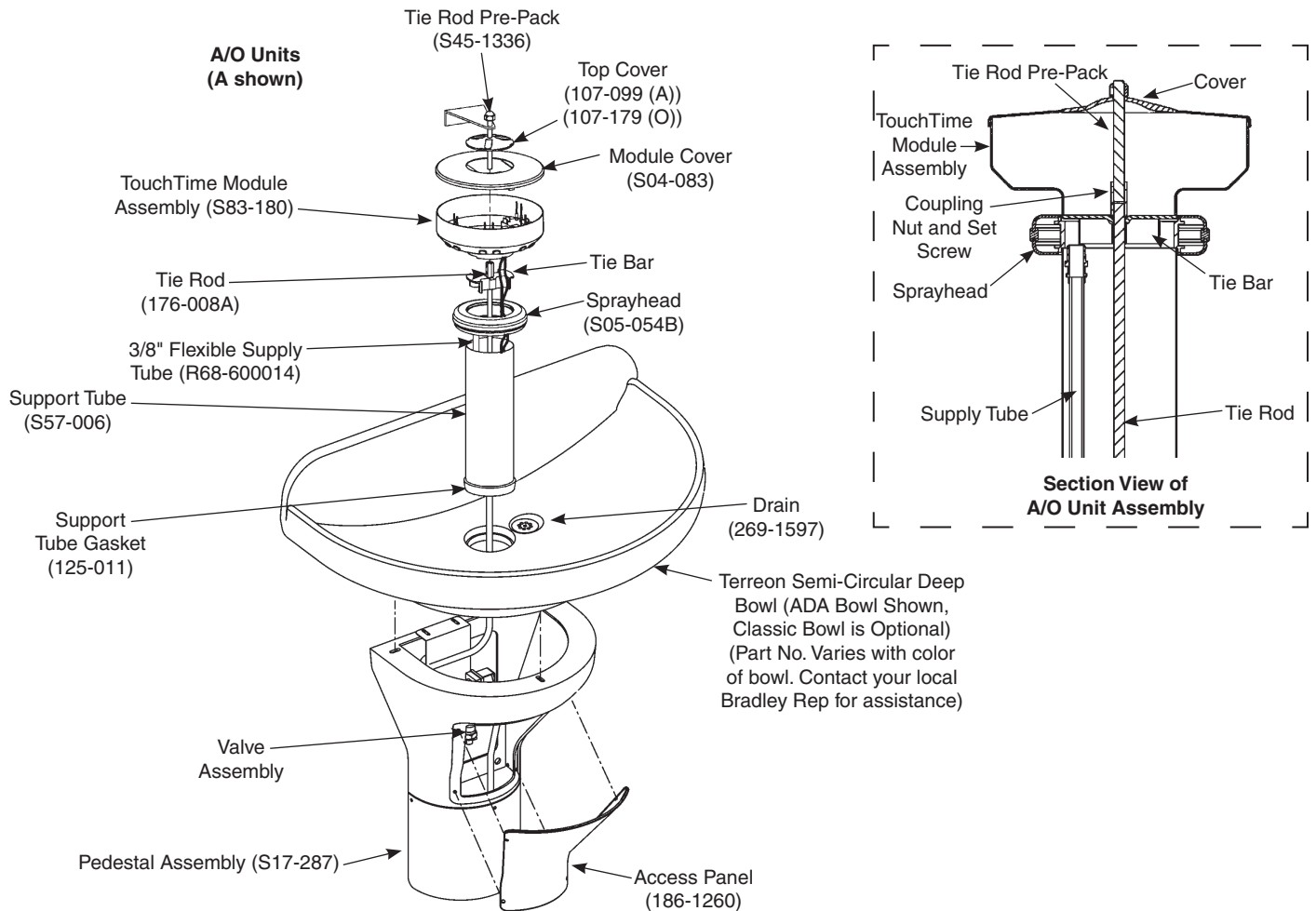
Skip to step F for units without soap.

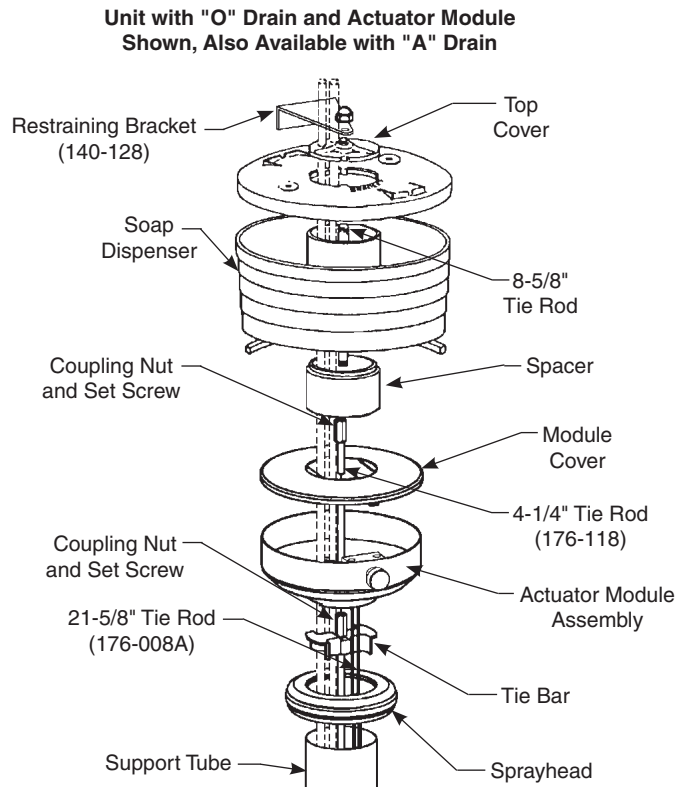
E For units with soap option, install the spacer, soap dispenser and cover using the coupling nut, third tie rod (8-5/8" long) and second coupling nut.

F Secure TouchTime module cover and top cover with acorn nut and socket head set screw.

G Holding the valve assembly outside of pedestal, connect 3/8" supply tubing from the sprayhead to the valve assembly tube connector. Also connect the two flexible hoses to the valve assembly.

H Thread one supplied 3/8" nut onto the tie rod. Slide valve assembly on next and secure with another 3/8" nut. Connect flexible hoses to supply stops. Make sure the hot supply is connected to the hot inlet on the valve (marked with the letter "H") and the cold supply is connected to the cold inlet on the valve (marked with the letter "C").





6 Valve and Electrical Connections for TouchTime



TouchTime switch has four wires.

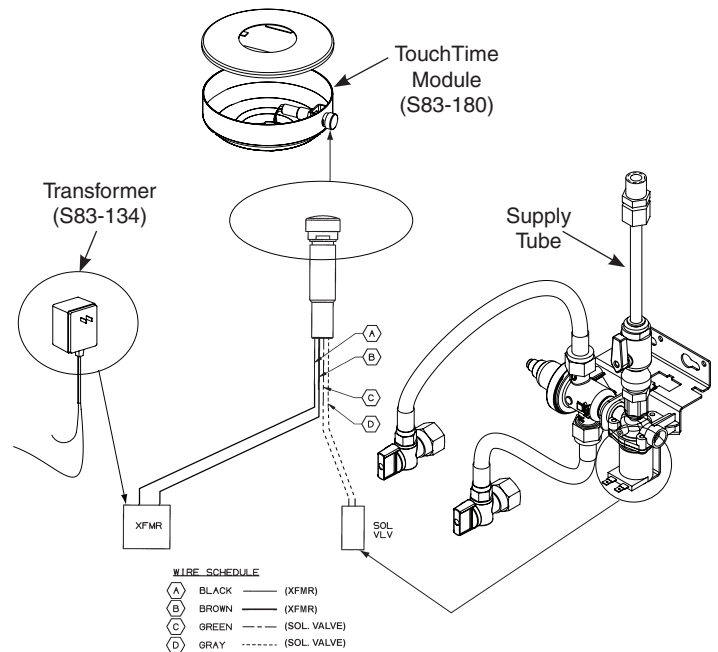
A Connect the two transformer wires and the two wires from the solenoid valve to the four wires from the TouchTime switch.

B Plug the 24 VAC Class II transformer into the 110 VAC GFI outlet.

C Turn supplies on. Open stop valves completely. Open volume control valve completely and check piping installation for leaks.

D Push the TouchTime switch to activate water. Water will turn on when the button is released. If the switch does not activate water, recheck electrical connections.

E Depress a pushbutton until air is purged from the lines.



7 Adjust the Temperature



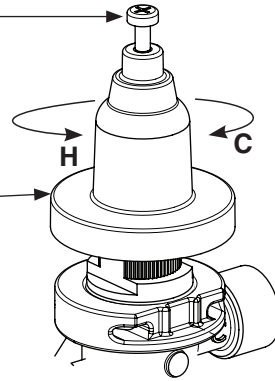
This valve is NOT factory preset. Upon installation, the temperature of this valve must be checked and adjusted to ensure delivery of a safe water temperature. Water in excess of 110°F (43°C) may cause scalding.

A Loosen Cap Screw about 1/4" (4-6 turns) and lift up cover (do not remove).

B Using cover, turn cartridge gently until desired water temperature is reached. Do not turn past stops as this may damage unit. Push cover down and tighten screw.

C Clean sprayhead if necessary. Adjust the volume control to control the flow of water.

D Attach pedestal access panel with hardware provided.



Cleaning and maintenance instructions for Terreon®

Material Description: Terreon® is an NAHB Certified densified solid surface material composed of polyester resin and is resistant to chemicals, stains, burns and impact. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives.

Routine Cleaning: Clean daily or as often as conditions require using a standard commercial or household cleaner such as Formula 409® or Windex®.

Stubborn Stains: Remove tough stains with Ajax®, Comet®, or Soft-Scrub® and a green Scotch-Brite® pad or lightly sand in a circular motion with 240 grit wet/dry sandpaper. The finish can be renewed with a maroon Scotch-Brite pad.

Special Situations for Material

Scratches: Remove scratches with a green Scotch-Brite® pad. The finish can then be renewed with a maroon Scotch-Brite® pad.

Hard Water Deposits: Remove hard water deposits with a mild solution of vinegar and water. Always rinse the unit thoroughly after cleaning.

Restoring the surface: Use Hope's® Solid Surface cleaner and polish to refresh and protect the Terreon Solid Surface material. Bradley recommends additional care and maintenance for the darker colored Terreon. For complete instructions on this additional maintenance see Bradley document #1505.

NOTICE! Do not use strong acid or alkaline chemicals and cleansers to clean Terreon. If these chemicals come in contact with the Terreon surface, wipe them off immediately and rinse with soapy water. Avoid contact with harsh chemicals such as paint remover, bleach, acetone, etc. Avoid contact with hot pans and objects.

Repair Kits: Terreon repair kits are available. Contact your Bradley representative or distributor for part numbers and pricing.



Repair kits are made to order and have a shelf life of 30 days.

Brand Names: Use of brand names is intended only to indicate a type of cleaner. This does not constitute an endorsement, nor does the omission of any brand name cleaner imply its inadequacy. Many products named are regional in distribution, and can be found in local supermarkets, department and hardware stores, or through your cleaning service. It is emphasized that all products should be used in strict accordance with package instructions.

Cleaning/Maintenance Instructions for Gel-coated Fiberglass

Material Description: The Terreon Washfountains referenced in this installation manual use a gel-coated fiberglass pedestal.

Routine Cleaning: The gel-coated pedestal should be cleaned daily or as often as needed with a mild solution of detergent and water. Always use a soft cloth to avoid damage to the finish.

Repair Kits: There are no repair kits available for fiberglass materials. However, replacement parts are available, contact your Bradley representative for pricing and part numbers.

NOTICE! Do not expose gel-coated fiberglass to solvents as they will damage the material and may create harmful fumes.

Brand Names: Use of brand names is intended only to indicate a type of cleaner. This does not constitute an endorsement, nor does the omission of any brand name cleaner imply its inadequacy. Many products named are regional in distribution, and can be found in local supermarkets, department and hardware stores, or through your cleaning service. It is emphasized that all products should be used in strict accordance with package instructions.

Cleaning and maintenance instructions for stainless steel

Material Description: Stainless steel is extremely durable, and maintenance is simple and inexpensive. Proper care, particularly under corrosive conditions, is essential. Always start with the simplest solution and work your way toward the more complicated.

Routine cleaning: Daily or as often as needed use a solution of warm water and soap, detergent, or ammonia. Apply the cleaning solution per the manufacturer's instructions and always use a soft cloth or sponge to avoid damaging the finish.

Stubborn Stains: To remove stains from stainless steel use a stainless steel cleaner and polish such as Ball® stainless steel cleaner or a soft abrasive. Always follow the manufacturer's instructions and apply in the same direction as the polish lines.

NOTICE! Never use ordinary steel wool or steel brushes on stainless steel. Always use stainless steel wool or stainless steel brushes.

Special Situations for Material

Fingerprints and Smears: To remove fingerprints or smears use a high quality stainless steel cleaner and polish in accordance with the manufacturer's instructions. Many of these products leave a protective coating that helps prevent future smears and fingerprints.

Grease and Oil : To remove grease and oil use a quality commercial detergent or caustic cleaner. Apply in accordance to the manufacturer's instructions and in the direction of the polish lines.

Precautions: Avoid prolonged contact with chlorides (bleaches, salts), bromides (sanitizing agents), thiocyanates (pesticides, photography chemicals, and some foods), and iodides on stainless steel equipment, especially if acid conditions exist.

NOTICE! Do not permit salty solutions to evaporate and dry on stainless steel.

The appearance of rust streaks on stainless steel leads to the belief that the stainless steel is rusting. Look for the actual source of the rust in some iron or steel particles which may be touching, but not actually a part of the stainless steel structure.

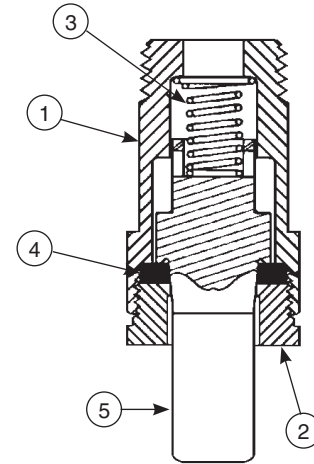
NOTICE! Strongly acidic or caustic cleaners may attack the steel, causing a reddish film to appear. The use of these cleaners should be avoided.

Brand Names: Use of brand names is intended only to indicate a type of cleaner. This does not constitute an endorsement, nor does the omission of any brand name cleaner imply its inadequacy. Many products named are regional in distribution, and can be found in local supermarkets, department and hardware stores, or through your cleaning service. It is emphasized that all products should be used in strict accordance with package instructions.

Soap Valve — Liquid — S09-007S

Parts List

| Item | Part No. | Description | Attaching Parts S09-007S | |
|------|-----------|--------------------------|--------------------------|--|
| | | | Qty | |
| 1 | 118-025 | Valve Body | 1 | |
| 2 | 110-007 | Packing Nut | 1 | |
| 3 | 135-001L | Spring | 1 | |
| 4 | 125-001BU | Washer | 1 | |
| 5 | 119-028 | Plunger | 1 | |
| * | 161-014 | Nut | 1 | |
| * | 124-001D | Washer | 2 | |
| * | 142-002AH | Washer - Stainless Steel | 1 | |



* Not Illustrated

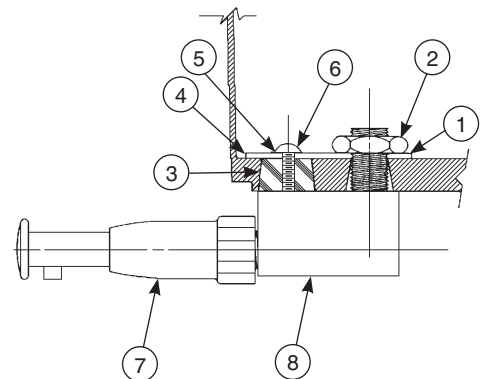
This valve delivers a measured amount of soap with each upward stroke. The soap dispenser has been standard on washfountains since 1983 and is not well-suited for very thick lotion soaps.

NOTICE! Lotion soap will clog liquid soap valves. Use only lotion soap valves with lotion soap.

Soap Valve — Lotion — S09-057S

Parts List

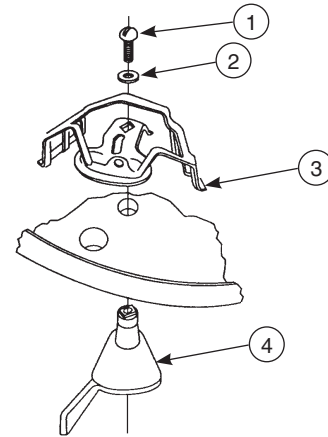
| Item | Part No. | Description | Valve Assembly S09-057 | Attaching Parts S09-057S |
|------|-----------|-------------------|------------------------|--------------------------|
| | | | Qty | |
| 1 | 124-001D | Washer | — | 1 |
| 2 | 110-057 | Nut | — | 1 |
| 3 | 125-001AN | Stopper | — | 1 |
| 4 | 159-114 | Reinforcing Plate | — | 1 |
| 5 | 124-001AT | Washer | — | 1 |
| 6 | 160-176 | Screw | — | 1 |
| 7 | S09-040 | Valve | 1 | 1 |
| 8 | S53-045 | Adaptor | 1 | 1 |



Soap Valve — Powdered — S09-010A

Parts List

| Item | Part No. | Qty | Description |
|------|----------|-----|------------------------|
| 1 | 160-069 | 1 | Screw, 1/4-20 RD |
| 2 | 142-002X | 1 | Washer, 1/4 Split-Lock |
| 3 | S62-002 | 1 | Agitator / Slide Assy. |
| 4 | 192-004 | 1 | Lever - Powdered Soap |



Reducer plugs are available for use with fine granulated soap to reduce the flow.



Valves can be changed from powdered to liquid by plugging the innermost, or “bearing” hole with rubber plug, part number 125-001AK. To change from liquid to powdered, the plug must be removed. If none is present, it will be necessary to drill out the bearing hole with a 1/2" or 5/8" drill. The plastic container configuration forms a natural template for locating the bearing hole.

Soap Maintenance Tips

Soap Recommendations

Quality soap dispensers require good quality soap and periodic maintenance to properly operate. Bradley soap dispensers will provide dependable, consistent operation over the long term when soap with reasonable viscosity and pH levels are used and when a minimal amount of periodic maintenance is performed on the valves.

Soap thickness is determined by a measurement called viscosity. Soap viscosity should be between 100 cps (centerpoise) and 2500 cps for all Bradley soap dispensers. Thinner soaps are perceived by the users as being “watered down” so users tend to take more than they need, resulting in waste. **Thick soaps flow slower and inhibit the “flushing” action of the valves, which allows the soap to congeal in the valve and cause clogs.**

The pH (acid) level of the soap should be in the range of 6.5 to 8.5. More acidic soaps (pH levels lower than 6.5) will corrode metal parts (even stainless steel!!) and degrade rubber and plastic components. They will also cause skin irritation. **Most inexpensive soaps (typically the pink lotion type) fall into this acidic category and will eventually cause valve failure and metal corrosion.** Base soaps (pH levels higher than 8.5) will cause swelling or degradation of rubber and plastic parts and skin irritation.

Generally, any quality soap meeting the viscosity and pH guidelines above will work well with Bradley soap dispensers. PCMX or Isopropanol based antibacterial soaps (within viscosity and pH limits) will also work with Bradley dispensers. Soaps satisfying these basic guidelines will provide consistent flow and reduce clogs.

Most soap dispenser problems are caused by soap that is too thick or corrosive, or by a lack of maintenance. Many soaps come in concentrate form which must be diluted with water. Often, the soap is improperly diluted or used straight out of the bottle, which causes clogging and valve failure. If proper soap is being used, valves that have never been cleaned are usually the source of dispensing problems. Bradley has entered into an agreement with Champion Brand Products to provide additional customer service for purchasers of our dispensers regarding soap issues. They are very helpful and can get to the bottom of almost any soap dispenser related problem. They also sell an excellent “Bradley approved” soap. Please see **Soap Instruction Sheet 215-1286** for details about soap valve cleaning or how to contact Champion. With proper maintenance and soap, Bradley dispensers will provide long term, trouble free operation.

Soap Dispenser Maintenance Instructions

Bradley soap dispensers will provide dependable, consistent operation over the long term when the proper soap is used and when a minimal amount of periodic maintenance is performed on the valves. Valves must be maintained (cleaned) to function properly.

To ensure proper operation of your soap dispenser, follow these instructions:

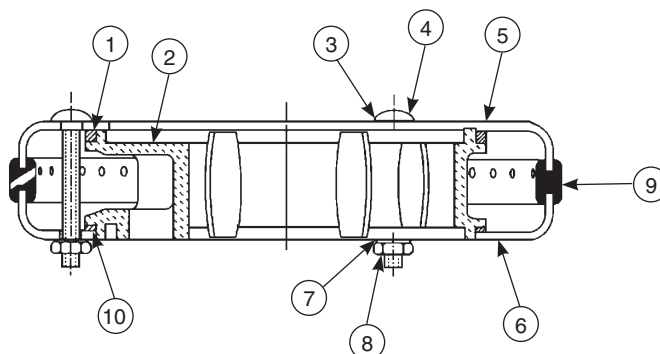
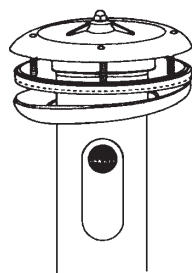
- Once per month, unscrew valve from reservoir and soak it for 30 minutes in hot water.
- Push valve at least 20 times while it is soaking.
- Flush soap reservoir with hot water while valve is soaking.

In cases of extreme clogging, the valve should be disassembled and the parts should be soaked in hot water or cleaning solution to restore proper functioning. Soap dispensers that will not be used for extended periods of time (schools during summer break, etc.) should be drained, cleaned and left empty until put back into service. Soap left on the outside of dispensers can cause discoloration and corrosion of the reservoir (even on stainless steel units). All soap should be wiped or scrubbed off daily, then the outside of the dispenser should be rinsed with clear water and dried with a soft cloth.

Sprayheads — Standard w/Neoprene Spray Ring Grommet



Repair kit does not include sprayhead grommet. Order as a separate item.



Parts List

| Item | Part No. | Description | Sprayhead Assembly S05-054B | Repair Kit S45-051 |
|------|-----------|---------------------------------|-----------------------------|--------------------|
| | | | Qty | |
| 1 | 125-001DE | Neoprene Washer - Top | 1 | 1 |
| 2 | 139-031 | Sprayhead Manifold | 1 | — |
| 3 | 124-001AL | Washer | 3 | 4 |
| 4 | 160-211 | Carriage Bolt | 3 | 4 |
| 5 | 115-061 | Sprayhead - Top | 1 | — |
| 6 | 116-008 | Sprayhead - Bottom | 1 | — |
| 7 | 124-001AT | Washer | 3 | 4 |
| 8 | 161-025 | Nut | 3 | 4 |
| 9 | 124-020D | Sprayhead Grommet - Semi-Circle | 1 | — |
| 10 | 125-001DF | Neoprene Washer - Bottom | 1 | 1 |

Sprayhead Service Suggestions

| Problem | Possible Cause | Solution |
|---|---|--|
| Water splashes over the rim of the bowl. | Foreign matter has reduced the size of the sprayhead slots, causing greater pressure at the open slots. | Clean the sprayhead: <ol style="list-style-type: none"> Disassemble the sprayhead and dislodge any dirt, lime build-up and foreign debris with a wire brush. Sprayheads with rubber grommet spray rings may be cleaned by rubbing a coin over the grommet. Throttle down the volume control (water spray should strike the bowl without splashing outside of the bowl). |
| Water flow diminishes from the sprayhead. | Strainer portion of the stop-strainer-check valve is plugged. | Remove and clean the strainer screen from the stop-strainer-check valve. |



The sprayhead shown above includes a perforated neoprene spray ring grommet that is self-cleaning. The water pressure flexes the spray holes which slows accumulation of foreign matter and tends to “break loose” any such deposits that may have accumulated.

TouchTime Troubleshooting



Make sure there is electrical power going to the transformer and there are 24 volts coming from the transformer.

WARNING! Be sure to turn off electrical and water supplies during troubleshooting.

| Problem | Cause | Solution |
|--|--|--|
| TouchTime push button unit does not function properly. | Water supply or power not on. | Make sure the water supply and the 24 VAC power are both turned on. |
| | Improper wiring | Check wiring. <ol style="list-style-type: none"> 1. Turn the electrical power off. 2. Check the wiring for loose connections or corrosion, correct if necessary. 3. Turn the electrical power back on and retest the push button. |
| | Transformer not functioning properly. | Test the transformer with a volt meter. <ol style="list-style-type: none"> 1. Turn water supply off (electrical should remain on). 2. Set the volt meter scale to be able to read "24 VAC". 3. Connect the volt meter leads from the transformer. 4. The voltage reading should indicate 24 VAC \pm10%. If you are unable to obtain a proper voltage reading, the transformer is not working properly and needs to be replaced. Contact your Bradley representative to order a replacement transformer. |
| | Solenoid valve not functioning properly. | Test the solenoid valve. <ol style="list-style-type: none"> 1. Disconnect the green/gray wires from the solenoid. 2. Disconnect the brown transformer leads from the terminal block. 3. Connect the brown transformer leads directly to the solenoid. The solenoid coil should activate and you should hear a single click and a humming noise. 4. If the solenoid still does not function, turn off electrical power. Then remove the four screws that secure the clamping plate to the valve body. Be careful not to lose the armature or spring. 5. Remove the diaphragm and clean it gently but thoroughly. Hold the diaphragm up to a light and find the small hole which is located about halfway between the inner and outer diameters. Make sure the hole in the diaphragm is not plugged. 6. Reassemble the valve in reverse order and test again with power from the transformer. If the solenoid coil does not activate, the solenoid valve is not working properly and needs to be replaced. Contact your Bradley representative to order a replacement solenoid valve assembly. |



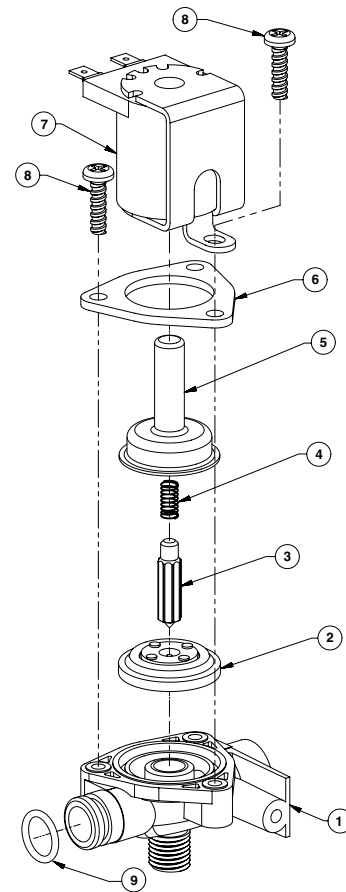
If, after checking the transformer, the solenoid valve and the wiring, you are unable to activate the sprayhead by pressing the TouchTime push button, the TouchTime switch assembly is not working properly and needs to be replaced. Contact your Bradley representative to order a replacement switch assembly.

Solenoid Valve S07-069 (closed body)



Turn off water supplies to the unit before troubleshooting.

| Item | Qty. | Part No. | Description |
|------|------|-----------|--------------------------|
| 1 | 1 | 118-308 | Valve Body, 5/16" Closed |
| 2 | 1 | 269-983 | Diaphragm |
| 3 | 1 | 269-577 | Armature |
| 4 | 1 | 269-578 | Spring |
| 5 | 1 | 269-1729 | Armature Housing |
| 6 | 1 | 269-1730 | Clamp, Armature Housing |
| 7 | 1 | 269-1797 | Coil, Solenoid Valve |
| 8 | 3 | 160-447 | Screw, #8 x 5/8" |
| 9 | 1 | 125-001CS | O-ring, #2-013 |



| Problem | Cause | Solution |
|--|---|---|
| An individual operating station fails to shut off and drips. | Debris is trapped between the diaphragm and the valve seat. | <p>Remove debris between diaphragm and the valve seat.</p> <ol style="list-style-type: none"> 1. Remove the three #8 Phillips-head screws that hold the solenoid valve assembly together. Be careful not to lose the armature or spring. 2. Remove the diaphragm. Remove any particles that have been trapped between the diaphragm and the valve seat. Rinse off the diaphragm and inspect for damage. Make sure the center orifice and both small side orifices are open. 3. Reassemble in reverse order (do not overtighten the Phillips-head screws or the plastic valve body may crack). Tighten until the armature plate makes contact with the plastic body. 4. Reconnect the wiring. |
| An individual operating station fails to turn on. | A failed coil for the valve or loose electrical connection to the terminal. | <p>Test the station to determine the cause.</p> <ol style="list-style-type: none"> 1. Disconnect the wires from the coil of an adjacent valve. Disconnect the wires from the problem valve and reconnect to the adjacent valve. 2. Turn on electrical and water supplies to the unit. Pass your hand in front of the sensor of the problem station, and the adjacent station should turn on. <p>If the adjacent station turns on and cycles normally, replace the coil on the problem valve.</p> <p>If the adjacent valve fails to turn on, inspect the wires from the sensor cable and do the following:</p> <ul style="list-style-type: none"> • make sure there are no breaks and that the fully insulated disconnect terminals are firmly crimped in place; • turn off the electrical and water supplies; • reconnect to the adjacent valve and turn on the water supplies to the unit; • pass your hand in front of the sensor. If the station still fails to turn on, replace the sensor. |

Thermostatic Mixing Valve Troubleshooting

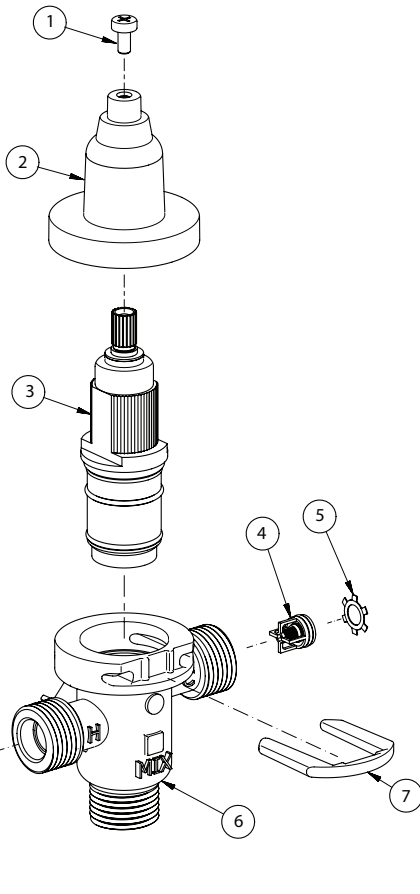
Before attempting to troubleshoot the valve or disassemble the components, check for the following conditions:

- If stop valves are used, make sure that they are fully open.
- Make sure that the hot and cold inlet pipes are connected properly, and that there are no cross-connections or leaking stop valves.
- Check the hot water heater output to make sure that it is at least 10° F above the set temperature.



Be sure to close the appropriate shut-off valves prior to disassembly of the valve and reopen the valves after inspection and repair is complete.

| Problem | Cause | Solution |
|--|---|--|
| External leaks. | Damaged cartridge or O-rings. | Replace cartridge with part number 269-1927 |
| Improper water temperature or temperature fluctuation. | Hot water supply is not 10° above desired set point. | Increase hot water supply temperature |
| | Valve temperature is not properly set. | Adjust the temperature as shown on page 11, step 7. |
| Limited water flow. | Dirt and debris have built up in the valve or strainer. | <ol style="list-style-type: none"> 1. Check to make sure both hot and cold supplies are connected to the Navigator mixing valve and that they have water flow. 2. Remove cover and U-clip. Remove the cartridge and clean the strainer. It is not required to grease cartridge, however if desired, use silicone grease only. Do not use grease on check valves. |



Parts List

| Item | Part No. | Description | Quantity |
|------|----------|------------------------|----------|
| | | | S59-4000 |
| 1 | 160-463 | Cap Screw | 1 |
| 2 | 107-582 | Cover | 1 |
| 3 | 269-1927 | Thermostatic Cartridge | 1 |
| 4 | 198-014 | Check Valve* | 2 |
| 5 | 132-051 | Retaining Ring* | 2 |
| 6 | 118-319 | Valve Body | 1 |
| 7 | 146-079 | U-Clip | 1 |

* Included with Prepack S65-326

Tempered Line Adapter Option
Part no. S39-804
 (replaces S59-4000 if tempered line is used)

Strainer (173-028)