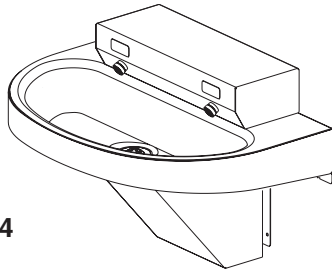


S93-572
S93-573



S93-574

Installation

S93-572 – AST4
S93-573 – TT
S93-574 – IR



Stainless Steel Wall-Hung BradMate™ Washfountain

(Standard* & Juvenile Height)

* Standard Height is ADA Compliant

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IMPORTANT!



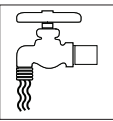
The AccuZone® Infrared and TouchTime control must be connected with a 24 VAC Class II transformer. Connections to 110 VAC can cause personal injury and will result in damage to the electronics.



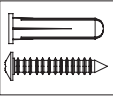
Read this entire installation manual to ensure proper installation. When finished with the installation, file this manual with the owner or maintenance department.



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.



Water supply requires a flowing pressure of at least 20 psi, but no greater than 80 psi. 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 Information” on our web site at www.bradleycorp.com.

Supplies Required by Installer

- (8) #10 diameter bolts with washers and (8) wall anchors appropriate for your installation
- (3) 1/4" diameter bolts with washer and (3) wall anchors appropriate for your installation
- Wall reinforcement (if required)
- 1/2" nominal copper tubing for hot and cold water supply pipes stubbed 1" out of wall
- 1-1/2" NPT drain pipe stubbed 1" out of wall
- Pipe sealant and plumber's putty
- For TT and IR Options
 - 110 VAC power source (110/24 VAC plug-in transformer supplied)
 - 110 VAC GFI outlet for transformer
 - OPTIONAL: Bradley recommends installing an electrical cut-off switch to the unit. This feature prevents accidental water delivery during regular maintenance and service.

Pre-installation information

The Bradley wall-hung BradMate™ meets or exceeds ADA requirements when mounted at standard height. The BradMate™ Washfountain is made of stainless steel and is attractively designed to serve one or two users. The Washfountain comes preassembled. Trap and flexible supply hoses are included.

AST4 – Push Button and metering valve

Each aerator is controlled by a separate push button and a separate metering valve, so each user activates a single metered flow of water pre-blended to a specific temperature. Each valve uses less than half the maximum amount of hot water allowed by the ANSI/ASHRAE/IES 90A-1980 Standard.

TT – TouchTime and solenoid valve

Each TouchTime push button activates a flow of water. Each aerator is controlled by a separate solenoid valve, allowing each user to activate a flow of tempered water from one aerator with a push button 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.

IR – AccuZone sensor and solenoid valve

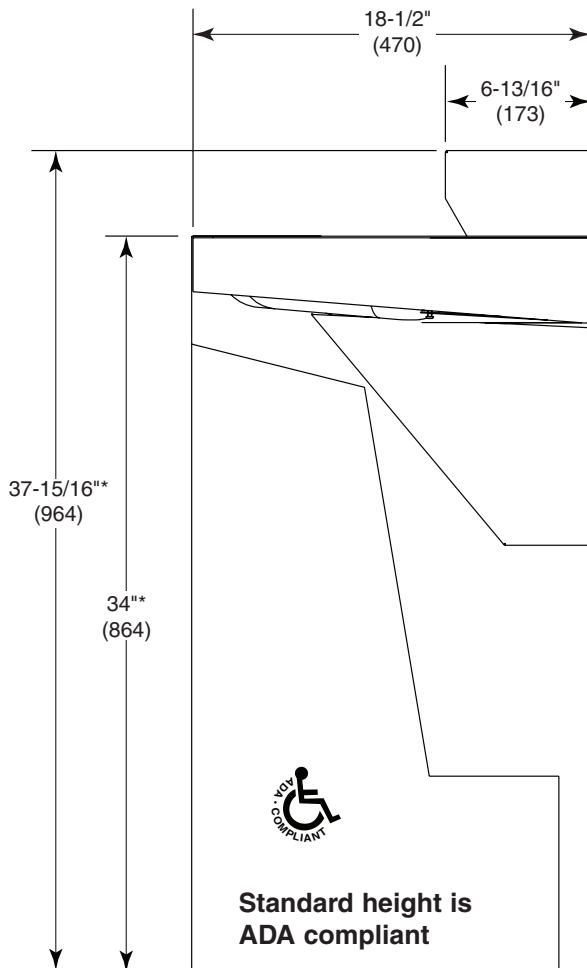
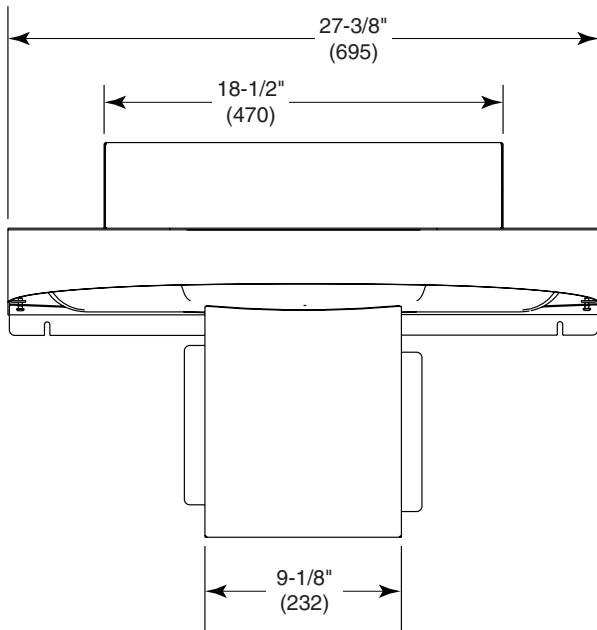
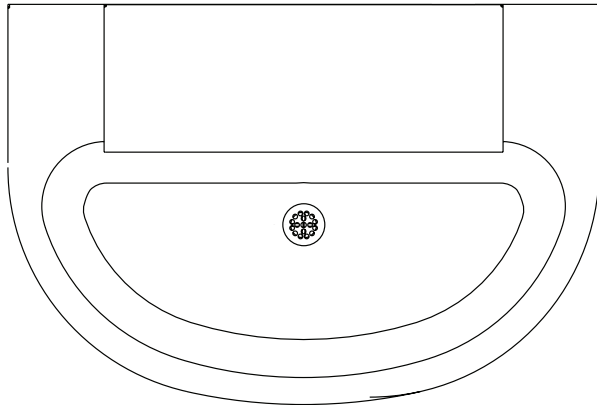
Each aerator is controlled by a separate solenoid valve, allowing each user to activate a flow of tempered water from one aerator. Each valve uses less than half the maximum amount of hot water allowed by the ANSI/ASHRAE/IES 90A-1980 Standard.

AccuZone Infrared sensor: The AccuZone sensors are housed in the backsplash to protect them from water, soap, and dirt. All electrical components are housed within the unit.

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.

BradMate™ Dimensions

(mm)



* Subtract 4" (101) from this dimension for juvenile height model.

1 Rough-Ins

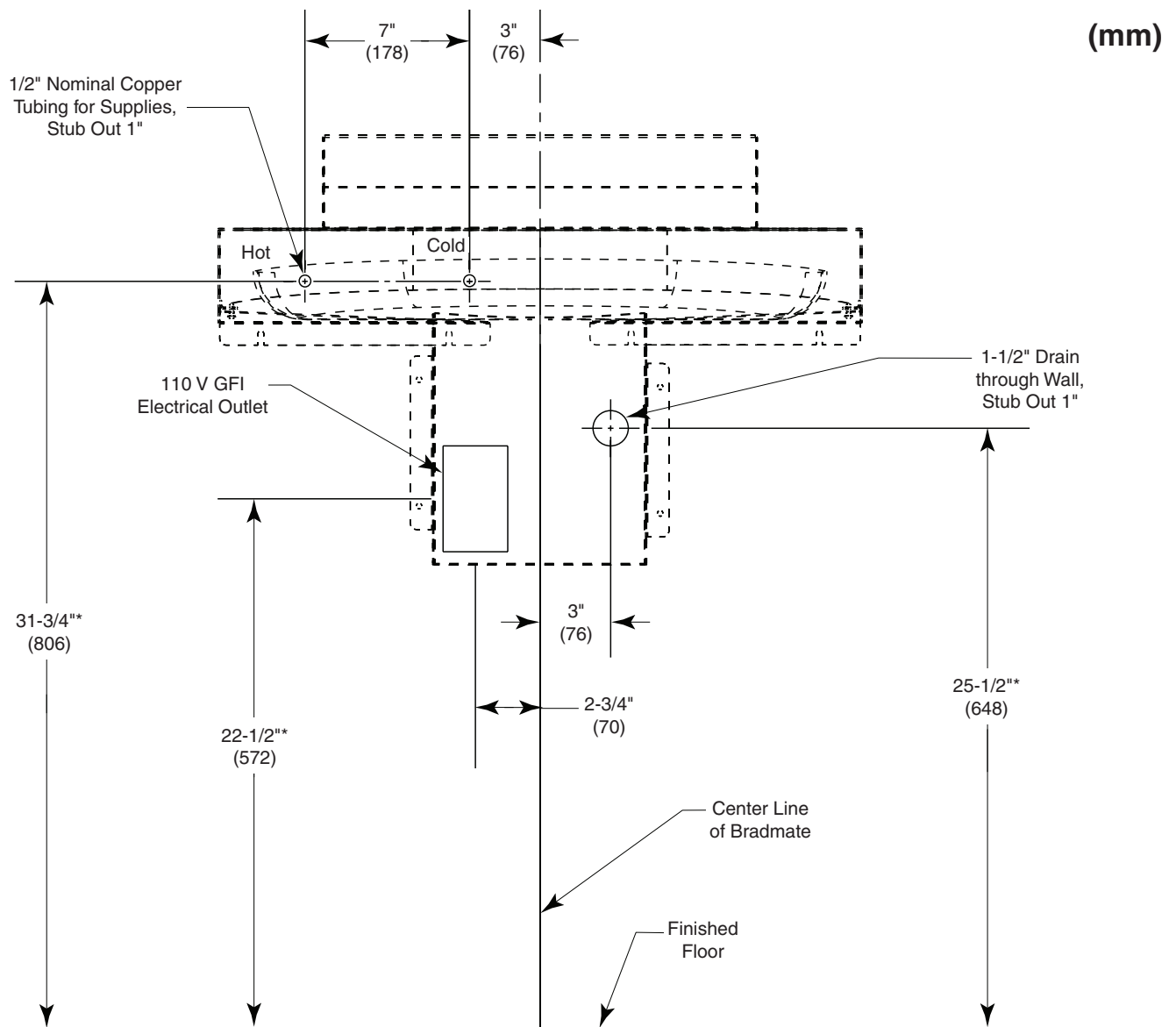
A Rough in 1/2" nominal copper tubing for hot and cold supply lines through wall at dimensions shown.

B Rough in 1-1/2" NPT drain waste connection through wall at dimensions shown.

IMPORTANT: Flush the supply lines before making connections. Debris in supply lines will cause the valves to malfunction.

CAUTION: The IR and TT models must be connected with a 24 VAC Class II plug-in transformer. Connection with 110 VAC will result in damage to the electronics and could result in personal injury.

IMPORTANT: Compliance and conformity to local codes and ordinances is the responsibility of the installer.



* Subtract 4" (101) from this dimension for juvenile height model.

2 Mount Washfountain to Wall



NOTE! ADA Compliant when mounted at standard height.

A Install three 1/4 wall anchors (supplied by installer) into the wall at dimensions shown.

B Install eight #10 wall anchors (supplied by installer) into the wall at dimensions shown.

C Mount center bracket to wall with bolt and washer (supplied by installer).



Anchor locations shown are to be used to determine reinforcement locations only. Use the fixture as a template for precise locations when installing anchors.



Anchors supplied by installer.



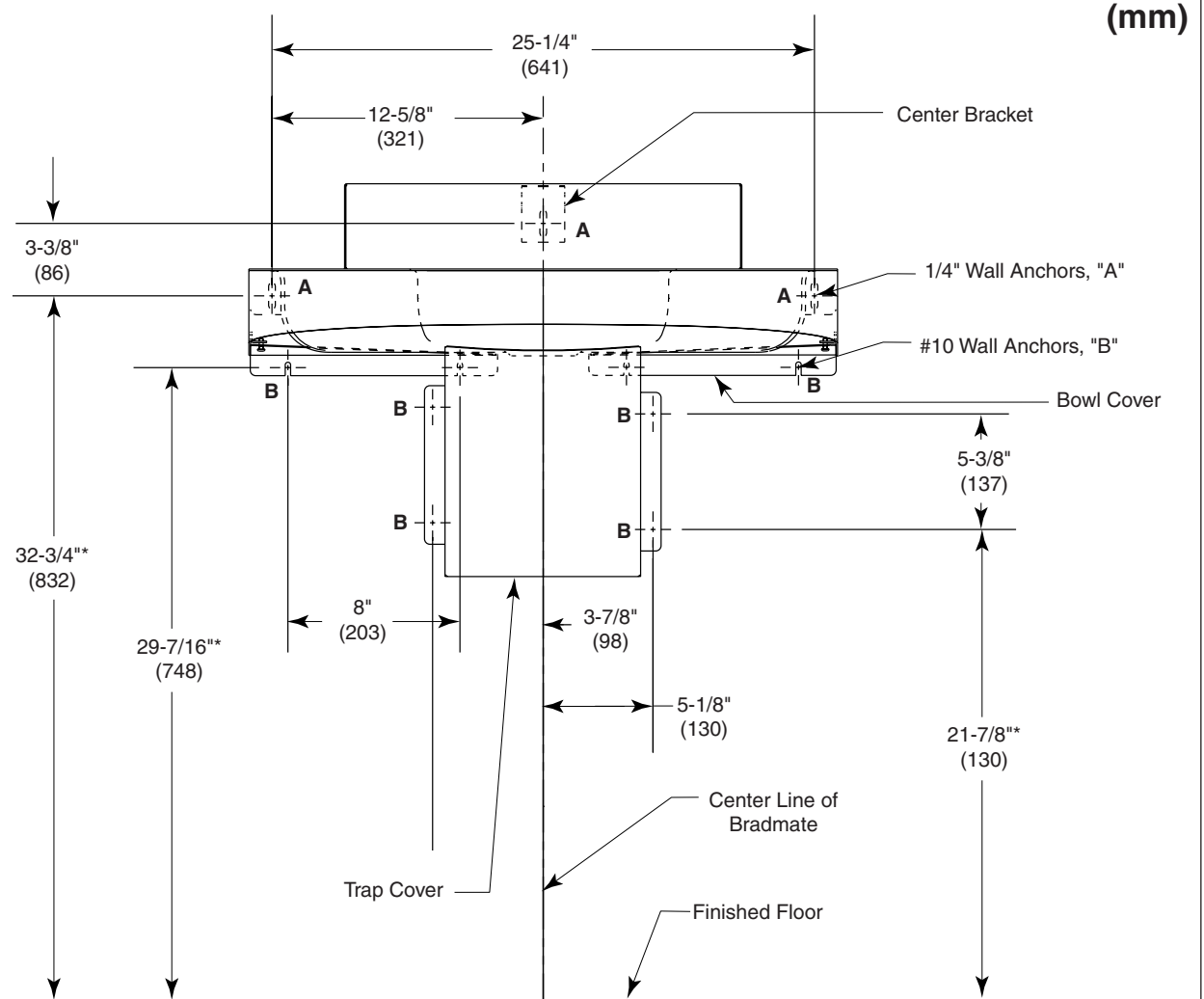
Dimensions shown in parentheses are millimeters.

D

Hang bowl/backsplash assembly on center bracket.

E

Fasten the assembly to wall on each side of bowl (bolts supplied by installer).



3 Assemble the Trap


A Insert the drain plug in the hole in the bottom of the BradMate™ bowl as shown.

B Beneath the bowl, install the rubber washer onto the drain plug.

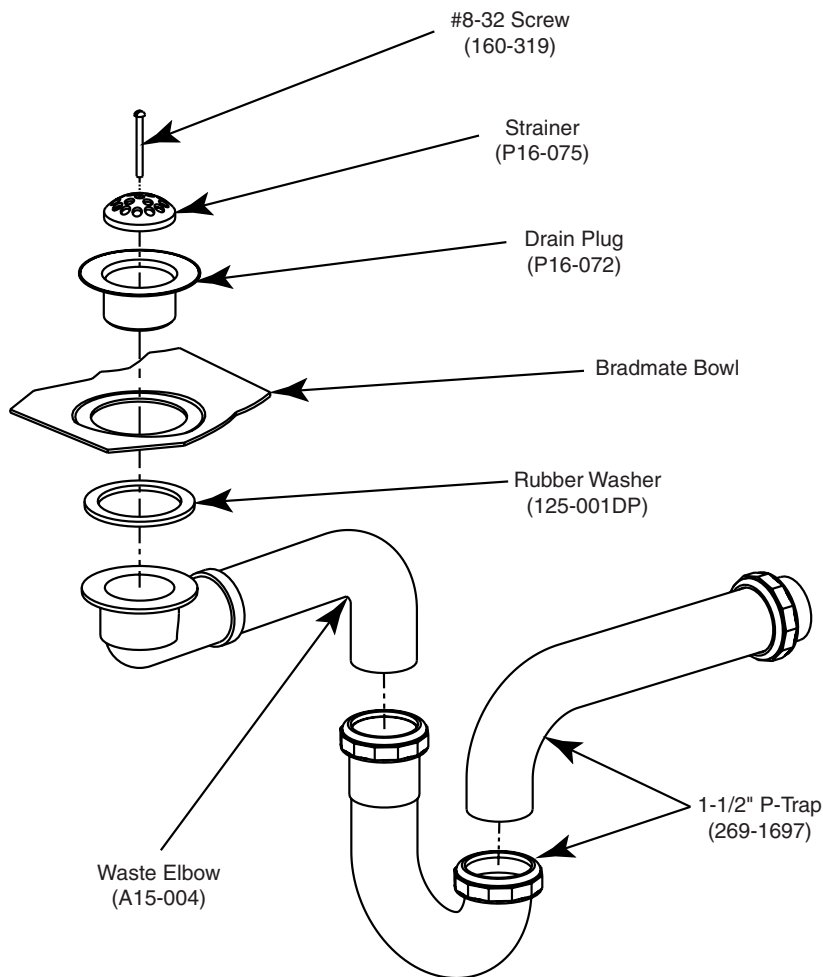
C Thread the waste elbow onto the drain plug.

D Insert the two rubber washers included with the P-trap into the tube ends.

E Connect one end of the P-trap to the waste elbow and the other end to the 1-1/2" drain pipe (supplied by installer).

 *The drain pipe should already be stubbed out 1" from the wall at the location.*

F Insert the strainer into the drain plug opening inside the bowl and push the strainer firmly down into place. **FASTEN WITH SCREW PROVIDED.**



4 Connect Supplies

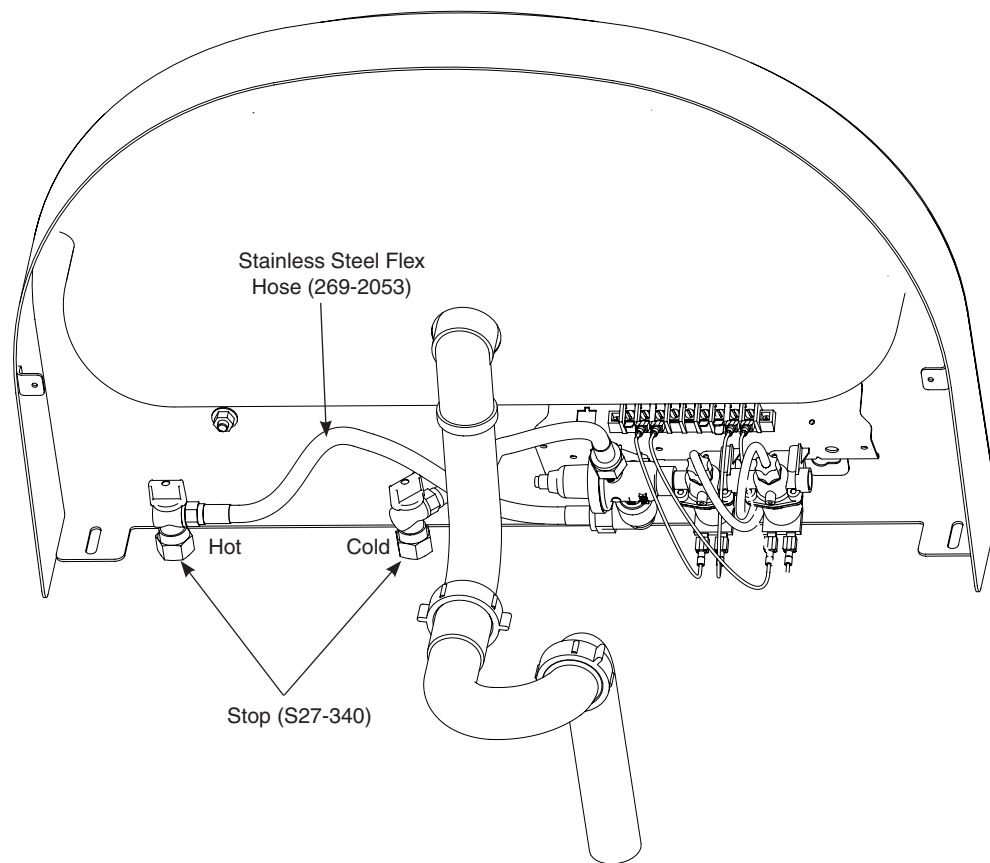
A Connect the 1/2" compression female end of the stop valves to the rough-ins.



The letter "H" on the Navigator Mixing Valve indicates hot water supply inlet.

B Connect the supply hoses to the stop valves and to the Navigator®. The hose attached to the hot water inlet of the Navigator (marked with the letter "H") must be connected to hot water rough-in.

The thermostatic mixing valve requires at least 115°F water from the hot water side for proper operation. As with all lavatories, there will be a delay in obtaining warm water. If the hot water is too far away from the washfountain, a circulating pump may be required.



5.1 Test the Installation - AST4



Make sure both stop valves are fully open.



The air valve timer is located next to the tube connector on the air valve body. The timer is capped with a filter to prevent dirt build-up on the timer. The air valve timing can be adjusted from 0–45 seconds.

A Turn on the water supply to test the unit and check for leaks.

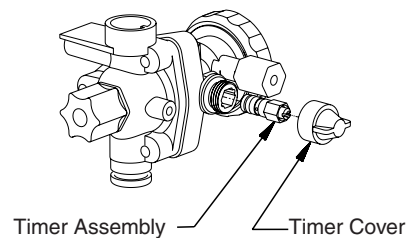
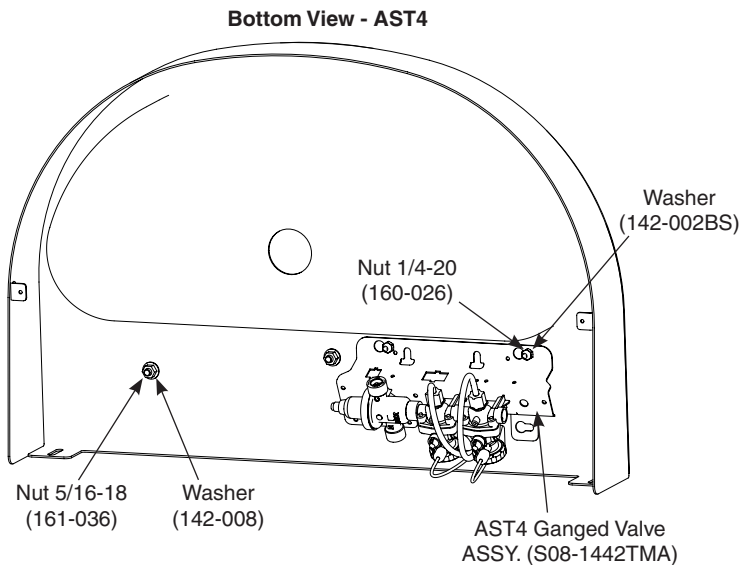
B Press the two push buttons several times to purge air from the lines.

5.1.1 Adjust Air Metering Valve

A Unscrew the timer cover and use a screwdriver to tighten or loosen the timer. Turning the timer clockwise increases the time; turning the timer counterclockwise decreases the time. Be careful not to overtighten as the timer seat can be damaged.

B Continue to adjust until the timer is set at desired length.

C Replace the timer cover over the timer.



5.2 Electrical Connection - TT

WARNING! The TouchTime control must be connected with a 24 VAC Class II transformer. Connections to 110 VAC can cause personal injury and will result in damage to the electronics.

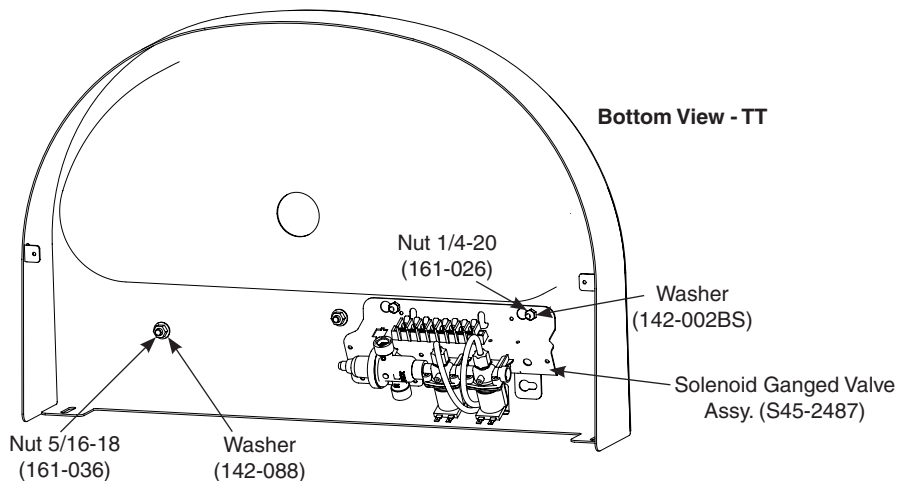
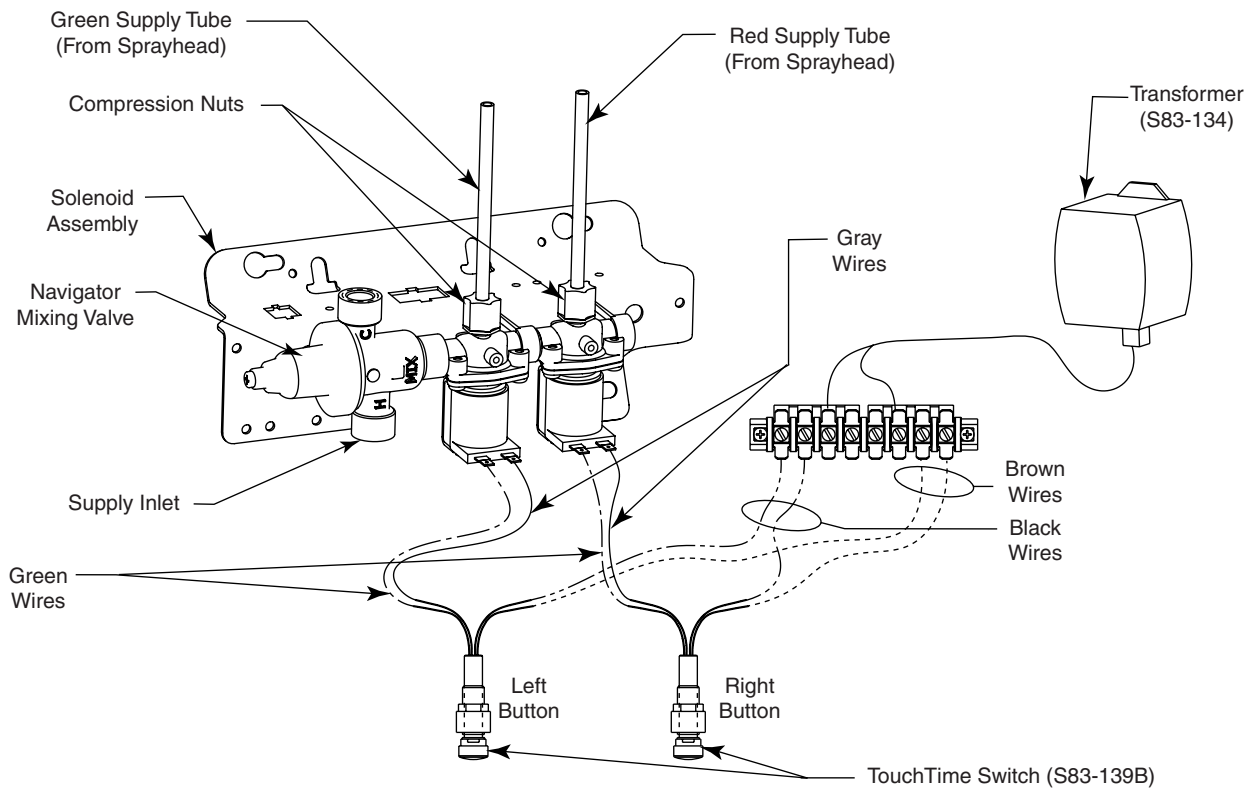
CAUTION! Connection of leads other than shown may cause permanent damage to the TouchTime switch.

A Install a GFI receptacle (supplied by installer) at location shown on rough-in drawing.

B Connect the transformer wires per the wiring diagram.

C Turn on the water supply to test the unit and check for leaks.

D Turn on the electrical power and depress each push button to verify activation.



5.3 Electrical Connections - IR

WARNING! The Infrared control must be connected with a 24 VAC Class II transformer. Connections to 110 VAC can cause personal injury and will result in damage to the electronics.

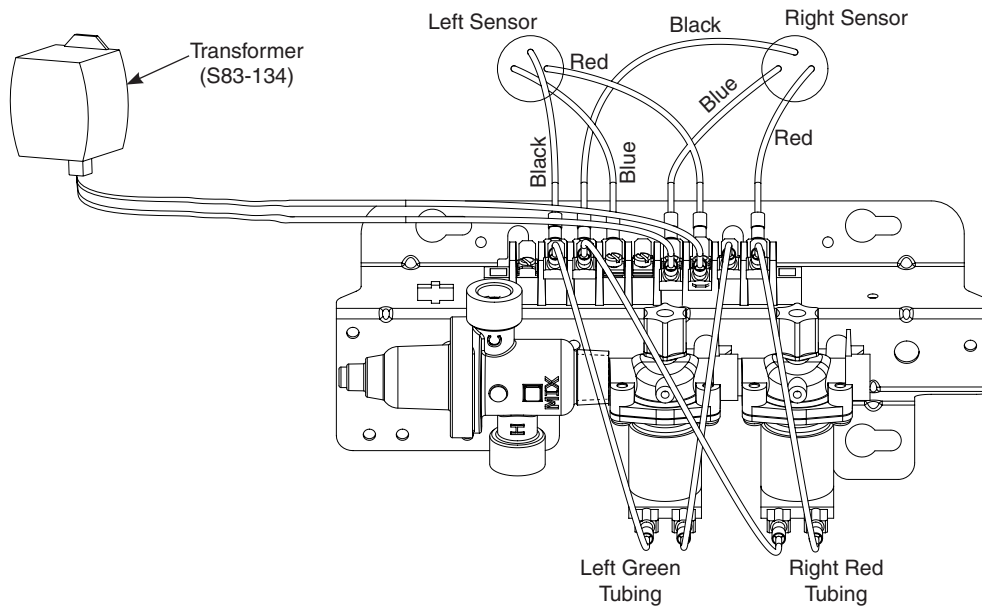
CAUTION! Connection of leads other than shown may cause permanent damage to the sensor.

A Install a GFI receptacle (supplied by installer) at location shown on rough-in drawing.

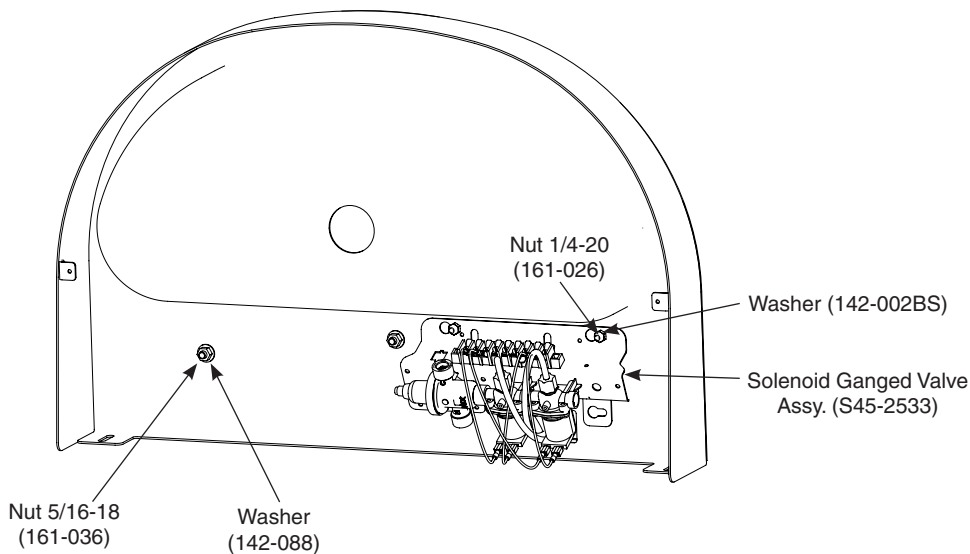
B Connect the transformer wires per the wiring diagram.

C Turn on the water supply to test the unit and check for leaks.

D Turn on the electrical power and pass your hand in front of each sensor to verify activation.



Bottom View - IR



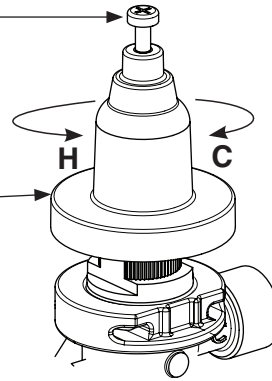
6 Adjust Temperature with Water Running



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.

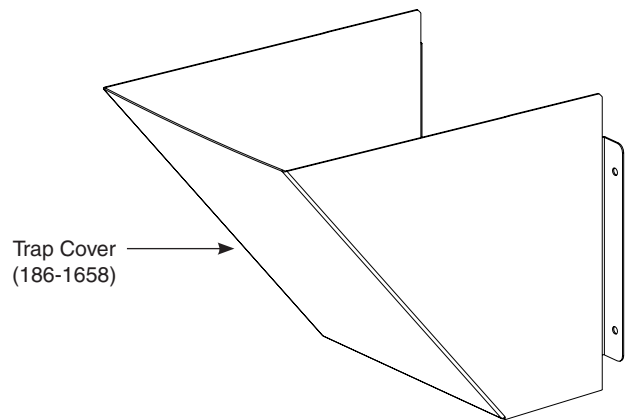
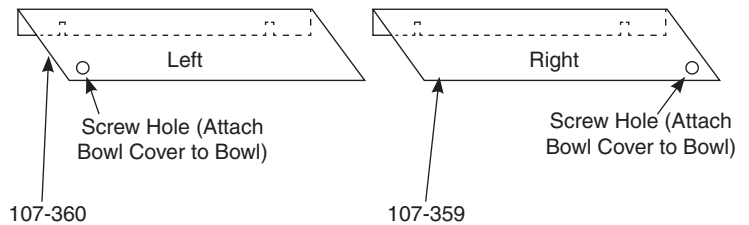


7 Complete Installation

A After the testing is complete, attach the left and right bowl covers over the piping/valve assembly underneath the bowl.

B Bolt the bowl covers to the wall with four #10 bolts (supplied by installer). Secure the bowl covers to the tabs on the underside of the bowl using the #10-32 screws provided.

C Attach the trap cover to the wall using four #10 bolts (supplied by installer).



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.



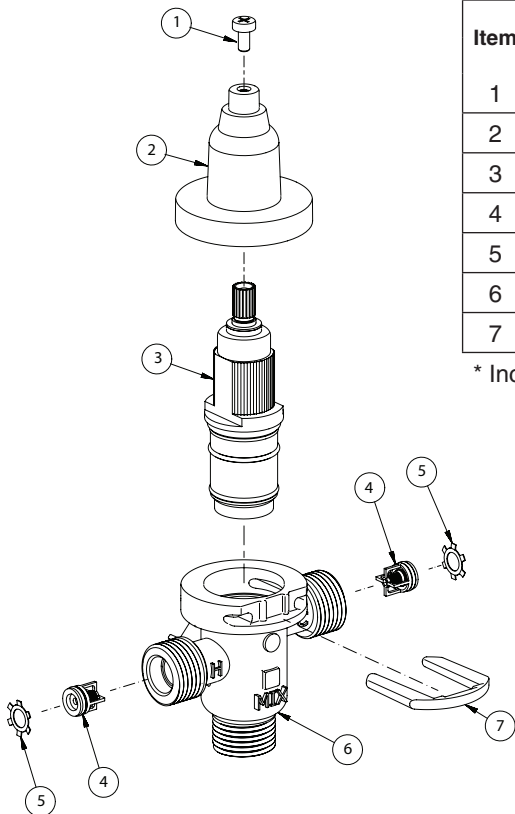
Be sure to close the appropriate shut-off valves prior to disassembly of the valve and reopen the valves after inspection and repair is complete.

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 12, step 6.
Limited water flow.	Dirt and debris have built up in the valve or strainer.	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	S59-4000A	S59-4000BY
1	160-463	Cap Screw	1	1	1
2	107-582	Cover	1	1	1
3	269-1927	Thermostatic Cartridge	1	1	1
4	198-014	Check Valve*	2	2	2
5	132-051	Retaining Ring*	2	2	2
6	118-319	Valve Body	1	1	1
7	146-079	U-Clip	1	1	1

* Included with Prepack S65-326

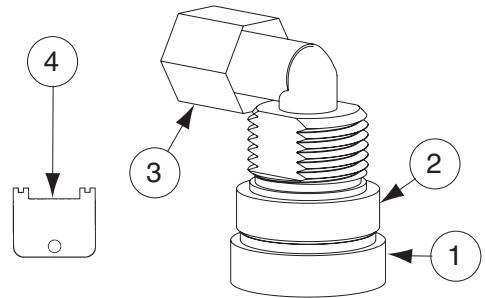


Tempered Line Adapter Option
Part no. S39-804
(replaces S59-4000 if tempered line is used)

Strainer (173-028)

Parts List — Aerator Assembly

Item	Part No.	Description	S05-157
			Qty
1	S05-142A	Std. Aerator, 0.5 GPM	1
2	153-402A	Adapter	1
3	145-090	90° Connector 1/4" tube x 1/8" NPT	1
* 4	130-141	Spanner Wrench for Aerator	—



* Spanner wrench not included in Assembly

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.

CAUTION! 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.

CAUTION! 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.

NOTE: 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.

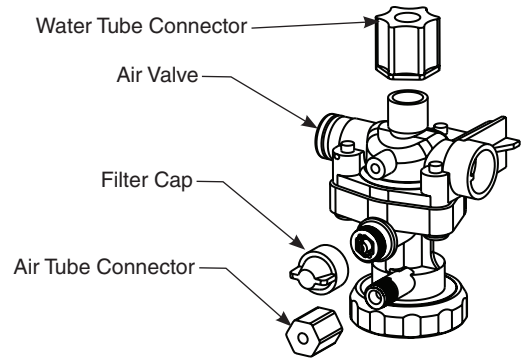
Metering Air Valve Maintenance

Adjust Air Valve Meter Time



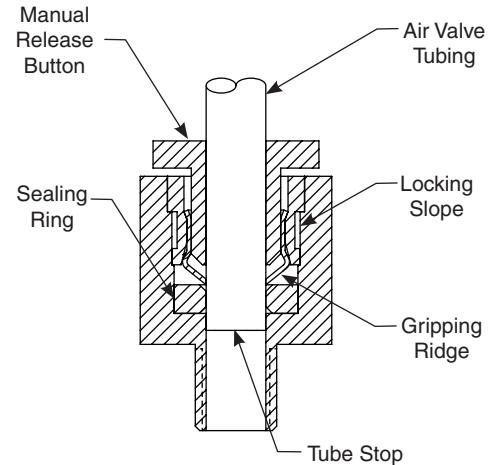
The air valve timer is located next to the tube connector on the air valve body. The timer is capped with a filter to prevent dirt build-up on the timer. The air valve timing can be adjusted from 5–60 seconds.

1. Remove filter cap and use a screwdriver to tighten or loosen the timer (see illustration at right). Turning the timer clockwise increases the time; turning the timer counterclockwise decreases the time.
2. Continue to adjust until the timer is set at desired length.
3. Replace filter cap over the timer.



Tube Connection Leaks

1. Push in the white manual release button while pulling the tube out (see illustration at right) to disconnect the tube at the connector. No tools are needed.
2. To correct a leak, press tubing firmly into the connector and make sure it is seated.
3. If leak persists, remove tubing from the fitting, and trim the tubing end square with a razor-sharp knife. If leak continues, replace the fitting or contact your Bradley representative for assistance.



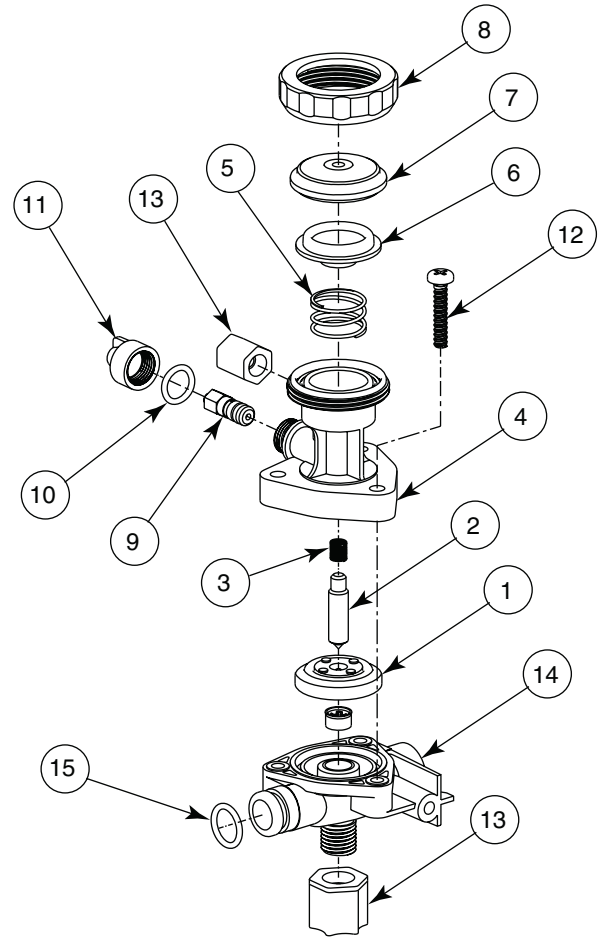
Troubleshooting – Stop Valve

Problem	Cause	Solution
Water just dribbles or does not flow from sprayhead.	Water supply malfunctioning.	<ol style="list-style-type: none"> 1. Close the stops and check the valves that supply water to the lavatory system. 2. Inspect the stop valves for proper installation.
Water sprayhead delivers all hot or cold water.	Water supply or mixing valve malfunctioning.	<ol style="list-style-type: none"> 1. Close the stops and check the valves that supply water to the lavatory system. 2. Inspect the stop valves for proper installation. 3. Inspect mixing valve for proper hot and cold installation. A red marking indicates the hot inlet.

Troubleshooting – Metering Air Valve



Turn off water supplies to the unit before troubleshooting.



Item	Qty.	Description
1	1	Diaphragm
2	1	Armature
3	1	Spring
4	1	AST 4 Valve Upper Body
5	1	Spring
6	1	Magnet/Diaphragm Assembly
7	1	AST 4 Valve Cover
8	1	AST 4 Valve Clamp Nut
9	1	AST 4 Valve Timer Assembly
10	2	O-Ring
11	1	AST 4 Valve Timer Cover
12	3	Screw, #8 x 7/8"
13	1	Compression Nut, 1/8" Tube
14	1	Compression Nut, 1/4" Tube
15	1	O-Ring

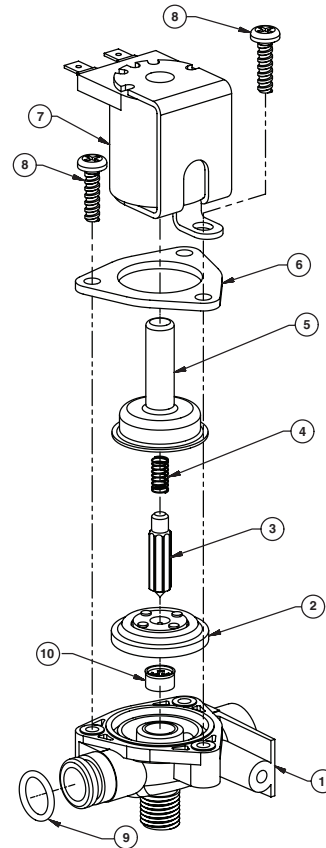
Problem	Cause	Solution
Valve will not shut off.	Timing mechanism is clogged.	Clean and inspect timing mechanism: <ol style="list-style-type: none"> 1. If compressed air is available, blow water and debris from timer cover of timing mechanism. 2. Turn adjusting screw out all the way. Clean and inspect screw and valve body. 3. Turn adjusting screw in to desired cycle time.
Valve will not turn on.	Water is not being supplied to unit.	Open all stops on mixing valve.
	Water pressure is over 80 PSI.	Install a pressure reducing valve.
	Failed diaphragm/magnet assembly.	Unscrew the valve clamp nut on valve. Remove valve cover. Gently press the diaphragm. The valve should activate. If not, replace the diaphragm/magnet assembly.
Timing can not be adjusted for more than 5 seconds.	There is an air leak.	Check the valve assembly: <ol style="list-style-type: none"> 1. Check all tubing and fittings for proper assembly. 2. Tighten cap and nut on 1/8" tubing.
Pushbutton does not work properly.	Air volume may not be sufficient to operate valve.	Check for leaks and lubricate U-cup: <ol style="list-style-type: none"> 1. Check all fittings for air leaks. 2. Disassemble pushbutton and lubricate U-cup seal (see pushbutton assembly diagram).
Water is dripping from the streamformers.	Debris has accumulated on valve seat or orifices.	Clean and inspect valve seat: <ol style="list-style-type: none"> 1. Remove screws and disassemble metering valve. 2. Clean valve seat and inspect for deep gouges or scratches. Replace valve body if necessary. 3. Remove any debris clogging off-center hole in rubber diaphragm.

Troubleshooting – Solenoid Valve S07-068 (closed body VAC)



Turn off water supplies to the unit before troubleshooting.

Item	Qty.	Part No.	Description
1	1	118-307	Valve Body, 1/4" 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	269-579	Coil, Solenoid Valve
8	3	160-447	Screw, #8 x 5/8"
9	1	125-165	O-ring, #2-013
10	1	125-160	Flow Restrictor, .5GPM



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. 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.