

# Installation

## MF2944/BIR3

**Terreon® Quadra-Fount™ Washfountain  
with Battery Operated Infrared Control**  
(Standard\*, Juvenile and OBC Height)

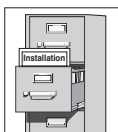
\* Standard Height is ADA/TAS Compliant



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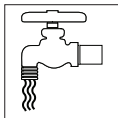
## IMPORTANT!



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

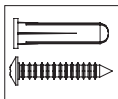


**Separate parts from packaging and make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not begin installation until you obtain the missing parts.**



**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 lb.**



**Product warranties may be found under "Product Information" on our web site at [www.bradleycorp.com](http://www.bradleycorp.com).**



## Supplies Required by Installer

- (6) 3/8" diameter bolts with washers and (6) wall anchors appropriate for your installation
- (2) 3/8" diameter bolts with washers and (2) floor anchors appropriate for your installation
- 1/2" nominal copper tubing for hot and cold water supply lines
- 1-1/2" NPT drain trap and waste connection
- Pipe sealant and plumber's putty

## Pre-Installation Information

### Terreon material

The Quadra-Fount 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.

### Infrared sensor and 6V DC solenoid valve

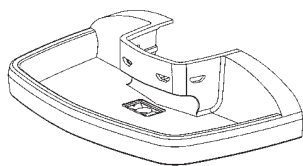
Each sprayhead is controlled by a 6V DC solenoid valve, allowing each user to activate a single flow of water. Each valve uses less than half the maximum amount of hot water allowed by the ANSI/ASHRAE/IES 90A-1980 Standard.

### Barrier-free and ADA compliant

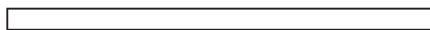
The Terreon Quadra-Fount with infrared is designed to comply with all ADA and TAS guidelines on reaches, clearances and operation ***when mounted at standard height dimensions by the installer.***

## Parts included with the Quarda-Fount™

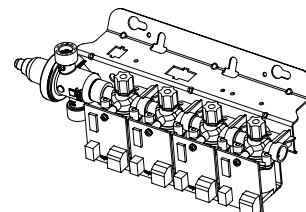
Separate all parts from packaging materials and ensure you have all the parts required for assembly. If any parts are missing, do not attempt to assemble the Bradley Terreon® Quarda-Fount™ Washfountain until you obtain all parts.



**Bowl**



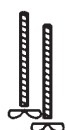
(4) 1/4" PLASTIC TUBING  
3' LONG



**Valve Assembly with  
Two Mounting Screws**



**Top Cover**

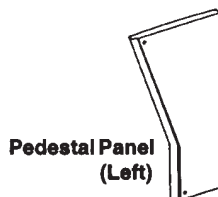


**Threaded Rod (2)**

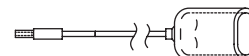
**Wing Nut (2)**



**Anchor Plate**



**Pedestal Panel  
(Left)**



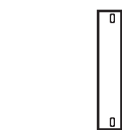
**Battery Holder**



**Battery**



**Front Panel**



**MOUNTING PANELS**

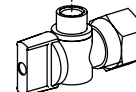


**Pedestal Panel  
(Right)**

**Hose-Stop Prepack - TL  
S45-2731 (optional)**

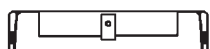


**Hose**



**Stop**

**PEDESTAL PREPACK  
S45-797B**



**UPPER BRACKET**



**LOWER BRACKET**

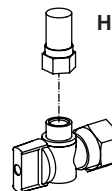
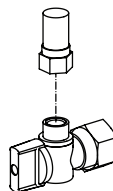


**(8) SCREW**



**(4) 5/16" I.D.  
WASHER**

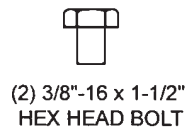
**Hose-Stop Prepack - TMA  
S45-2730**



**Hose**

**Stop**

**PREPACK S45-1283**



**(2) 3/8"-16 x 1-1/2"  
HEX HEAD BOLT**



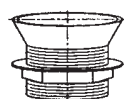
**STRAINER**



**(2) 10-24 x 1/2"  
FLAT SOCKET  
HEAD SCREW**



**(2) 1/4"-20 x 1/2"  
PAN HEAD SCREW**



**DRAIN SPUD**



**(2) 3/8"-16  
HEX NUT**



**(2) ANCHOR PLATE**



**(2) 5/16" I.D. WASHER**



**(2) WALL BRACKET**



**(2) 13/32" I.D.  
PLAIN WASHER**





**(2) 3/8" I.D. LOCK  
WASHER**

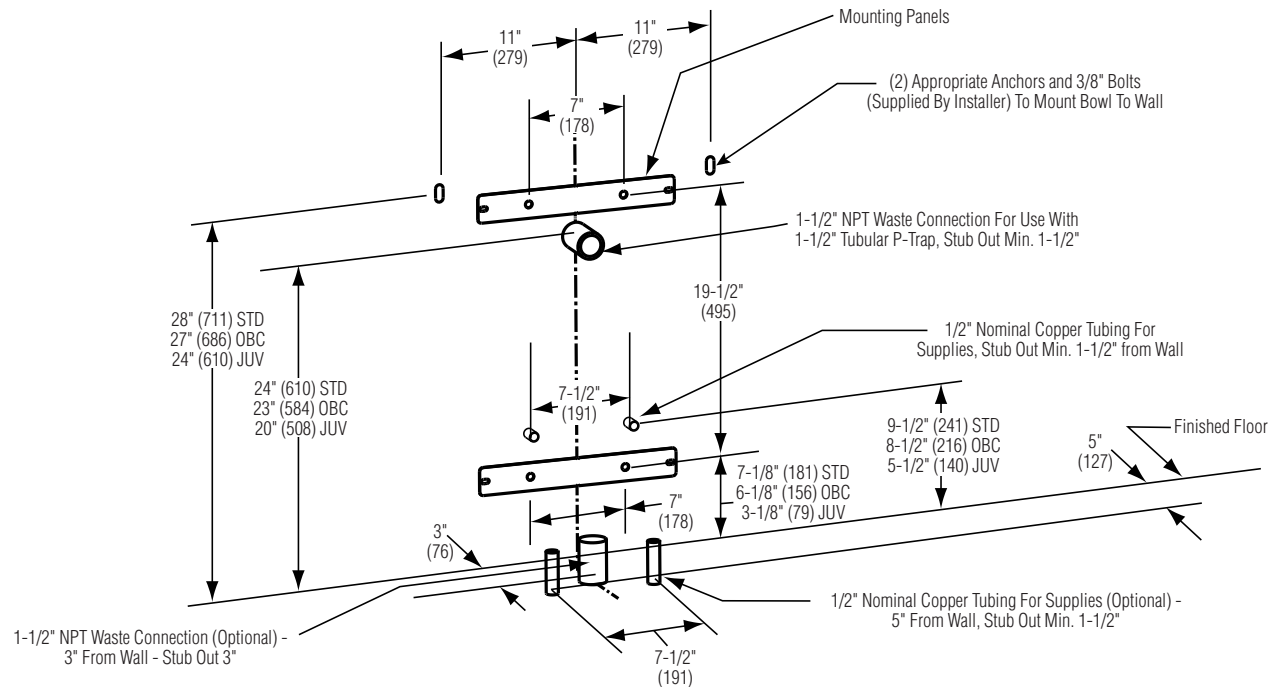
## 1 Rough-Ins

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

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

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

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



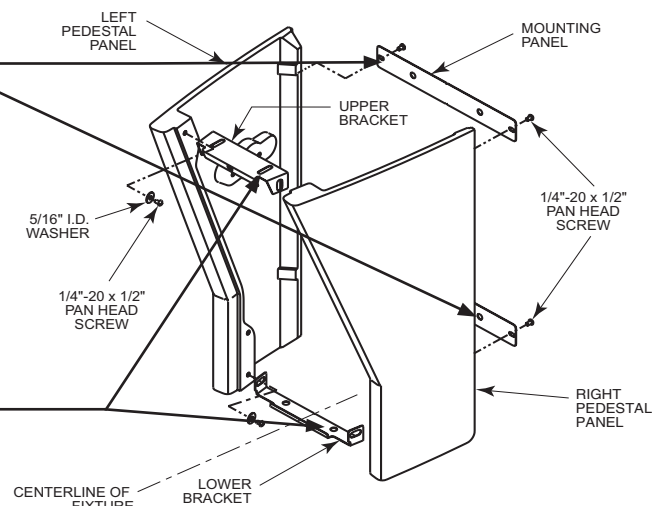
## 2 Assemble Pedestal




*Washers are not utilized on back of mounting panels.*

**A** Fasten the mounting panels to the pedestal with four pan head 1/4"- 20 x 1/2" screws supplied.

**B** Install the upper and lower brackets to the pedestal panels with two pan head 1/4"- 20 x 1/2" screws and 5/16" I.D. washers supplied.



### 3 Install Pedestal

 Remove molding strips or tiles which could prevent a flush mounting to the wall.



**A** Measure and mark the centerline of the washfountain on the wall and floor.

**B** Before mounting the pedestal to the floor, make sure the floor is level. If it is not level, be prepared to install shims when positioning the pedestal in Step C.

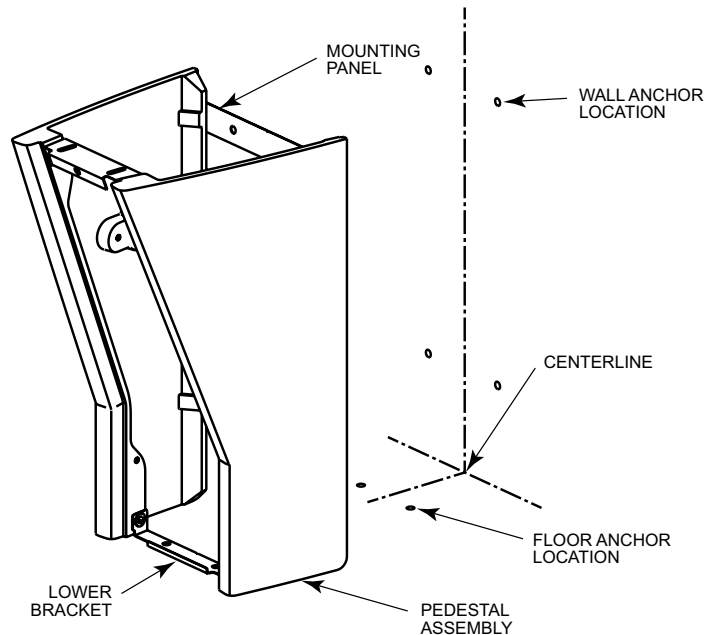
**C** With someone to assist you, move the pedestal assembly to the wall using appropriate lifting procedures, and align the locating notches on the mounting panel with the centerline marked on the wall. If the floor is not level, install shims under the left and/or right pedestal.

**D** Drill holes in the wall through the four 1/2" diameter holes in the mounting panel and install four anchors (supplied by installer) for 3/8" bolts.

**E** Secure the pedestal assembly to the wall anchors using four 3/8" bolts and washers (supplied by installer).

**F** Drill holes in the floor through the two 1/2" diameter holes in the lower bracket and install two anchors (supplied by installer) for 3/8" bolts.

**G** After floor anchors are installed, secure the pedestal assembly to the floor anchors using two 3/8" bolts and washers (supplied by installer).



#### 4 Install Solenoid Assembly



*The letter "H" on the Navigator® mixing valve indicates hot water supply inlet.*

**A** Attach the stops to hot and cold water rough-ins.

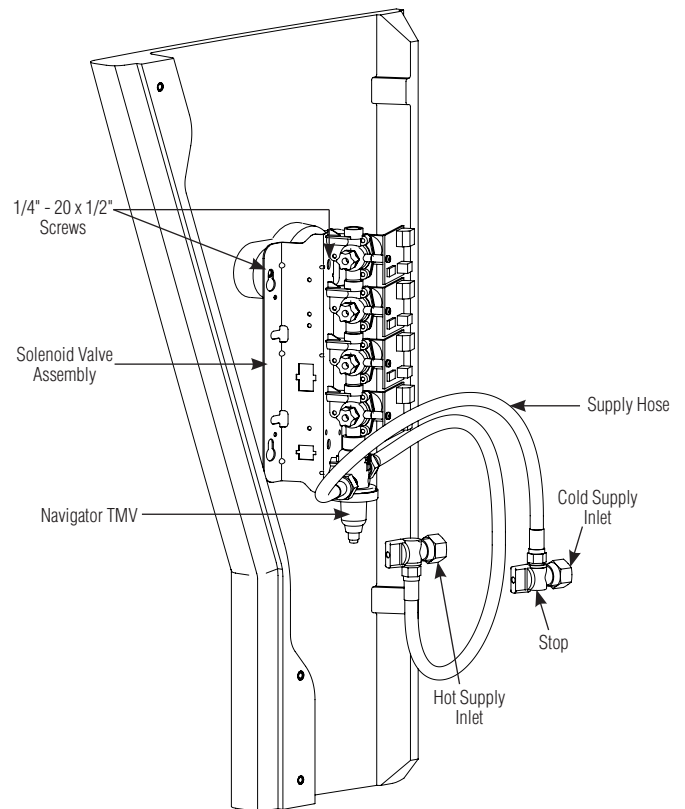
**B** Connect one end of each supply hose to the stops.

**C** Inside the pedestal, install the two 1/4" - 20 x 1/2" screws (supplied with valve assembly) in the mounting holes on the side of the left pedestal panel. Do not thread the screw completely into the panel, but allow 5/16" of the screw to be exposed.

**D** Connect the other end of each supply hose to the Navigator® TMV valve assembly (one on the hot side, one of the cold side).

**E** Mount the valve bracket to the left side of the pedestal.

**F** For optional single tempered supply: attach the stop to the 1/2" tempered supply line. Connect the stop to the solenoid valve assembly with the flexible supply hose.



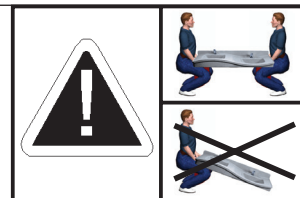
## 5 Assemble and Install Bowl



**Do not leave the bowl on the pedestal unsupported, as it may fall and cause personal injury or damage to property.**



*Discard rubber gasket included with drain spud. It cannot be used in this application.*



**A** Install two 3/8" wall anchors (supplied by installer) which will be used to mount the bowl to wall (see rough-ins on page 4).

**B** Carefully remove the sprayhead cover.

**C** Carefully lift the bowl onto the pedestal frame using appropriate lifting procedures. Ensure bowl remains 3-4" from the wall.

**D** Install the two wall anchor brackets to the back of the bowl using the 3/8"- 16 x 1-1/2" hex-head bolts, 13/32" I.D. plain washers, anchor plates, 3/8" I.D. lockwashers, and 3/8"- 16 hex nuts provided.

**E** Uncoil the infrared sensor leads and plastic tubing from the rear of the backsplash.

**F** Slide the bowl back to the wall and secure the bowl's wall brackets to the wall anchors with two 3/8" bolts and washers (supplied by installer).

**G** Fasten the bowl to the upper bracket on the pedestal assembly with the two 1/4"- 20 x 1/2" round-head screws and 5/16" I.D. washers supplied.

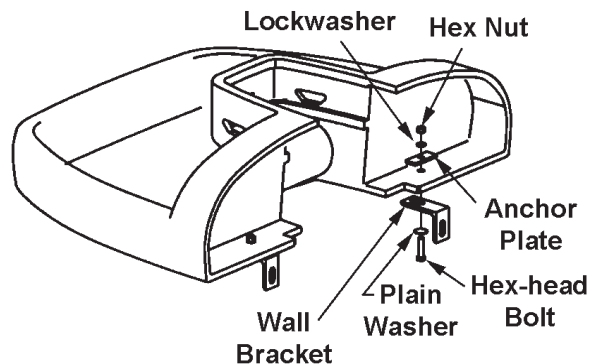
**H** Install the drain spud in the bowl using plumber's putty.

**I** From beneath bowl, thread the spud washer and spud locknut onto the drain spud and tighten the locknut against the bowl.

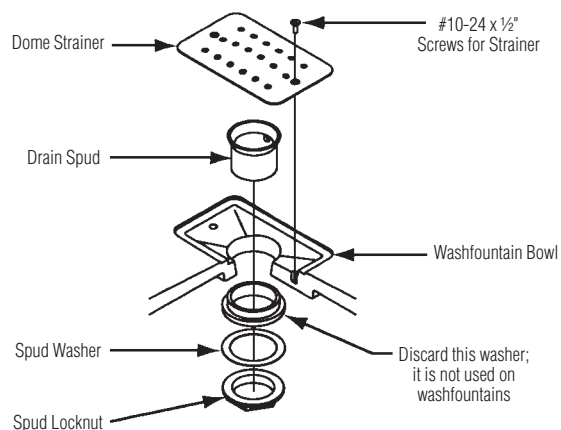
**J** Install strainer in the bowl drain using the two #10-24 x 1/2" flat socket head screws supplied.

**K** Connect the drain trap (supplied by installer) to the drain spud and drain line.

Back View of Washfountain Bowl



Drain Assembly



## 6 Electrical and Supply Connections



*Sensor cables must be attached before the battery cables are plugged into the circuit boards.*



**Connections of leads other than shown may cause permanent damage to the sensor.**

**A**

Insert 4 different colored sprayhead supply tubes into four solenoid tube connectors by loosening tube connector cap and firmly pushing tubing into tube connector until the tubes are fully seated, then re-tighten connector cap.

**B**

Connect the sensor cable from the right hand station to the circuit board attached to the solenoid with the yellow supply tube.

**C**

Connect the sensor cable from the right center station to the circuit board attached to the solenoid with the black supply tube.

**D**

Connect the sensor cable from the left center hand station to the circuit board attached to the solenoid with the green supply.

**E**

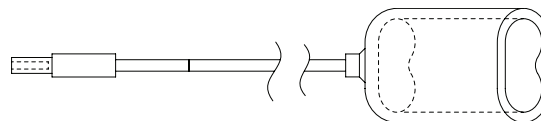
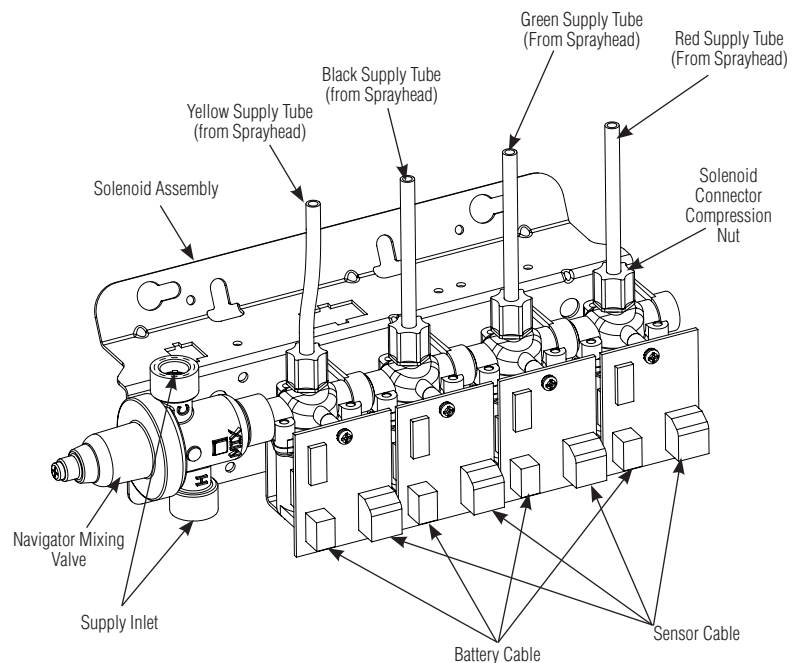
Connect the sensor cable from the left hand station to the circuit board attached to the solenoid with the red supply.

**F**

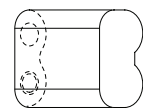
Insert the batteries into the battery holders and then mount the battery holders (with batteries) in a convenient location in the pedestal.

**G**

Snap the battery connector cables into the circuit board plugs.



Battery Holder (S83-177)



6-Volt Lithium Battery  
Type DL223A or Equivalent  
(261-010)



## 7 Check Operation

**A** Check to make sure both stops are fully open (see page 6).

**B** Turn on the main water supply to the Quadra-Fount and check for leaks.

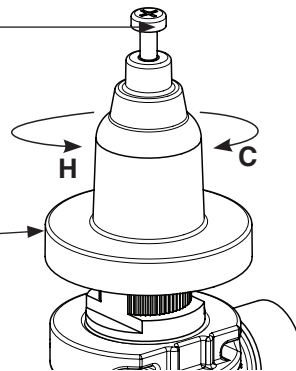
**C** Turn on the electrical power and pass your hand in front of each sensor until air is purged from the lines.

**D** Loosen Cap Screw about ¼" (4-6 turns) and lift up cover (do not remove).

**E** 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.



*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.*



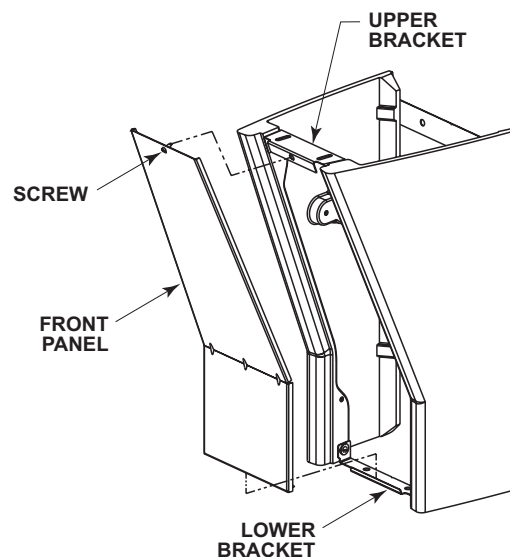
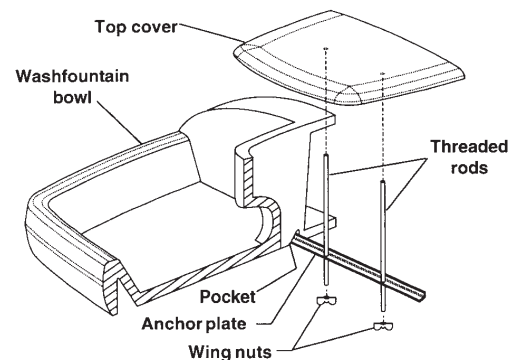
## 8 Install Top Cover and Front Panel

**A** Carefully place the top cover with threaded rods on top of washfountain sprayhead.

**B** Inside the pedestal assembly of the washfountain (use front access), slide the anchor plate onto the threaded rods and secure anchor plate against bowl using the wing nuts provided.

**C** To install front panel, slip slot in bottom of front pedestal panel over the lip on the lower bracket,

**D** Secure panel to upper bracket with attached screw.



## 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.



**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.



*When cleaning units equipped with infrared (electronic eye) activation, it is helpful to turn off the power to the unit or cover the windows to prevent accidental activation. After the window is covered, the water will run for approximately 30 seconds and then shut off.*

## 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.



**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.



**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.



*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.

## Troubleshooting BIR3 Components



**CAUTION:** Turn off water supplies to unit before troubleshooting.

**Problem:** An individual operating station drips and fails to shut off.

**Cause:** There is debris trapped between the diaphragm and the valve seat.

**Solution:** Remove debris between diaphragm and the valve seat.

Disconnect the plug from the battery to the circuit board of the problem valve. Remove the three #8 Phillips-head screws that hold the solenoid valve assembly together. Be careful not to lose the armature or spring. Remove the diaphragm. Remove any particles that are 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. Reassemble in reverse order, being careful not to overtighten the Phillips-head screws or you may crack the plastic valve body. Tighten until the armature plate makes contact with the plastic body. Reconnect the battery plug. Turn on water supplies to the unit.

**Problem:** An individual operating station fails to turn on or off.

**Cause:** Excessive line pressure.

**Solution:** Install pressure reducing valve.

Check the static line pressure. If the pressure exceeds 80 psi, install a pressure reducer valve at the street main. Excessive line pressure (over 60 psi) will shorten the life of any valve.

**Problem:** An individual operating station fails to turn on or off.

**Cause:** A dead or faulty battery.

**Solution:** Test the station to determine cause and replace battery if required.

Disconnect the plug from the battery to the circuit board of the problem valve. Disconnect the plug from the battery to the circuit board of an adjacent valve. Connect the battery plug from the adjacent working valve to the problem valve. Wait for ten seconds. Activate the problem station's sensor ten times. The station should turn on. If the station turns on, and cycles normally, replace the battery.

**Cause:** Faulty sensor eyes.

**Solution:** Test station to determine cause; replace sensor eyes if required.

Disconnect the sensor cable from the circuit board of the problem valve. Disconnect the sensor cable from the circuit board of an adjacent working valve. Connect the sensor cable from the adjacent working valve to the problem valve. Activate the problem station's sensor. The station should turn on. If the station turns on and cycles normally, replace the sensor eyes.

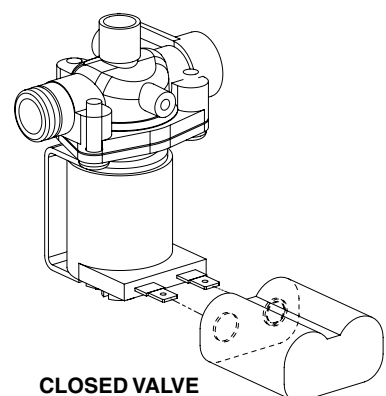
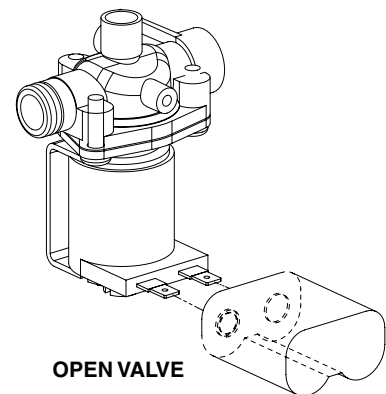
**Cause:** Faulty solenoid valve.

**Solution:** Test station to determine cause; replace solenoid valve if required.

Remove the screw, circuit board and standoff from the problem valve. Remove the battery holder. With a good working battery, briefly contact the solenoid valve directly with the battery as shown in Open Valve figure to right. The contact should cause the valve to open. With the battery holder removed, briefly contact the solenoid valve with the battery in the position shown in Closed Valve figure to right. This should cause the valve to close. If the valve does not operate when directly contacted with a good battery, and the solenoid valve has already been cleaned as outlined at the beginning of this troubleshooting section, replace the solenoid valve.

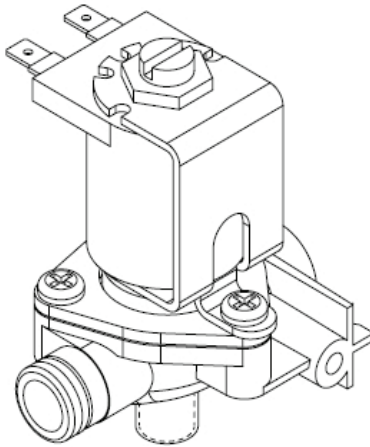
**If problems persist:**

Pass your hand in front of the problem station, while at the same time looking to see if the indicator light on the circuit board flashes (the indicator light is located near the hole in the circuit board where the standoff is mounted). If it does not flash, and the battery and sensor eyes have already been tested as outlined above, the problem may be with the circuit board. Make a note of the numbers printed on the circuit board, then contact your Bradley representative for assistance.

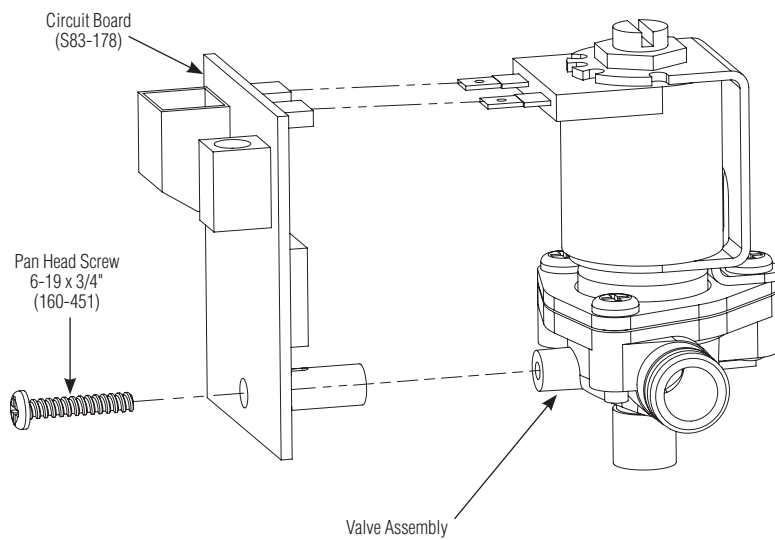


## Troubleshooting

**Solenoid Valve – Service Part Nos. S07-073S (Closed Body) & S07-073AS (Thru Body)**



**Solenoid Valve with Circuit Board – Part Nos. S07-083S (Closed Body) & S07-083AS (Thru Body)**



## Thermostatic Mixing Valve Troubleshooting



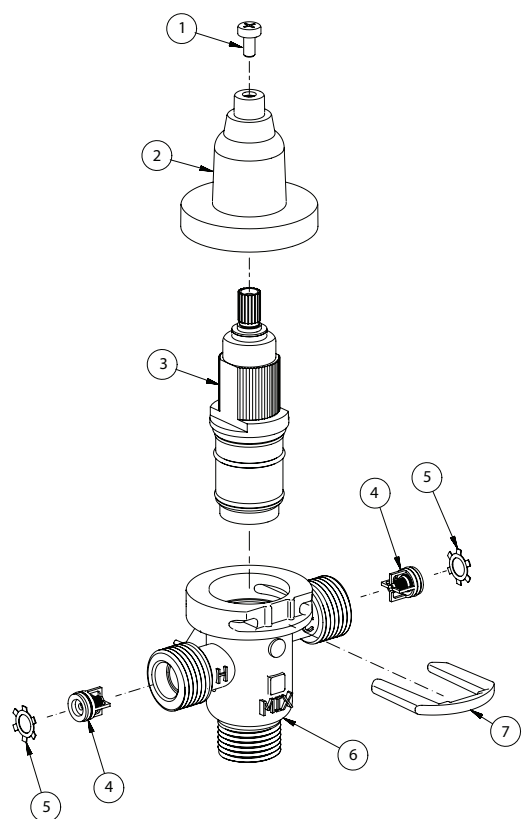
Before attempting to troubleshoot the valve or disassemble the components, check for the following conditions:

- 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 9 step 7.
Limited water flow.	Dirt and debris have built up in the valve or strainer.	<p>1. Check to make sure both hot and cold supplies are connected to the Navigator mixing valve and that they have water flow.</p> <p>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.</p>



### 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)

