

OPTIMA®

INSTALLATION INSTRUCTIONS FOR SENSOR ACTIVATED HAND WASHING SINK

EHS-1000 SERIES



Model EHS-1770

EHS-1080 Hand Washing Sink
with ETF-80 Faucet

EHS-1600 Hand Washing Sink
with ETF-600 Faucet

EHS-1660 Hand Washing Sink
with ETF-660 Faucet

EHS-1700 Hand Washing Sink
with ETF-700 Faucet

EHS-1750 Hand Washing Sink
with EBF-750 Faucet †

EHS-1770 Hand Washing Sink
with ETF-770 Faucet

† The EBF-750 Faucet is battery operated.

LIMITED WARRANTY

Sloan Valve Company warrants its EHS-1000 Series Hand Washing Sinks to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of three years (one year for special finishes) from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale. This warranty does not cover the life of the batteries (battery operated models).

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

PRIOR TO INSTALLATION

Before installing the EHS-1000 Series Hand Washing Sink, install the items listed below. Also, refer to the rough-in diagrams on Page 2.

- Ground Fault Interrupt (GFCI) Electrical Receptacle for Plug-in Transformer (one for each sink) — 120 VAC, 2 amp service for each ETF-233 Plug-in Transformer (24 VAC, 35 VA)
- Drain line
- Hot and cold water supply lines or tempered water supply line

Important:

- *ADEQUATE STRUCTURAL SUPPORT IN OR BEHIND THE WALL IS REQUIRED. STRUCTURAL SUPPORT MUST WITHSTAND WEIGHT OF SINK WHEN FILLED WITH WATER.*
- *INSTALL ALL ELECTRICAL WIRING IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.*
- *INSTALL ALL PLUMBING IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.*
- *A 24 VAC STEP-DOWN TRANSFORMER (SUPPLIED) MUST BE USED.*
- *USE APPROPRIATE PRECAUTIONS WHILE CONNECTING TRANSFORMER TO 120 VAC POWER SOURCE.*
- *DO NOT PLUG TRANSFORMER INTO POWER SOURCE (RECEPTACLE) UNTIL ALL WIRING IS COMPLETED. ALLOWING 24 VAC TRANSFORMER WIRES TO TOUCH OR SHORT WHILE POWER IS BEING SUPPLIED WILL CAUSE PERMANENT DAMAGE TO THE TRANSFORMER AND CIRCUIT CONTROL MODULE.*

- *KEEP THREAD SEALANT OUT OF YOUR WATERWAY TO PREVENT COMPONENT PART DAMAGE! DO NOT USE ANY SEALANT ON COMPRESSION FITTINGS. FOR THREADED PIPE FITTINGS, DO NOT APPLY SEALANT TO THE FIRST TWO "STARTER" THREADS.*
- *FLUSH ALL WATER LINES PRIOR TO MAKING CONNECTIONS.*

Protect the chrome or special finish of this Hand Washing Sink — DO NOT use toothed tools to install or service it. Also, see "Care and Cleaning" section of this manual.

TOOLS REQUIRED FOR INSTALLATION

- Electric drill for drilling anchor holes
- Standard socket set or open end wrench set for installing anchoring fasteners, "Z" clip fasteners and connecting water lines
- Pipe wrench for installing drain line

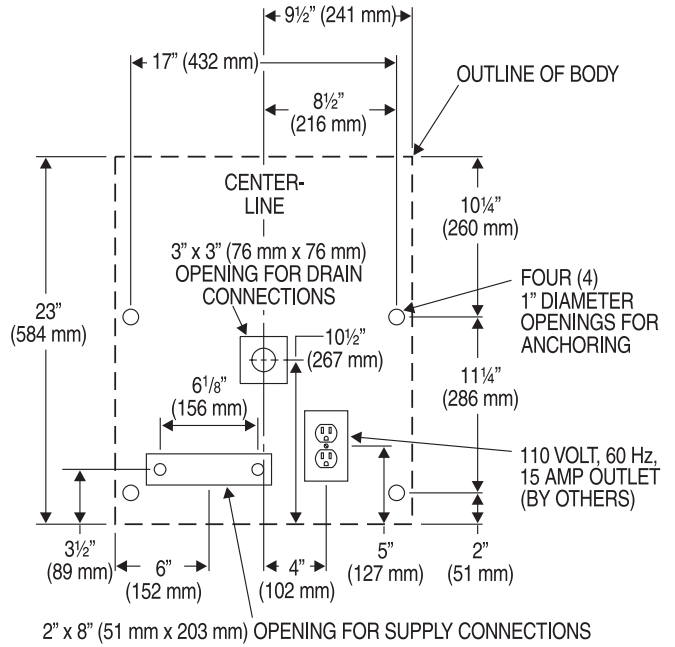
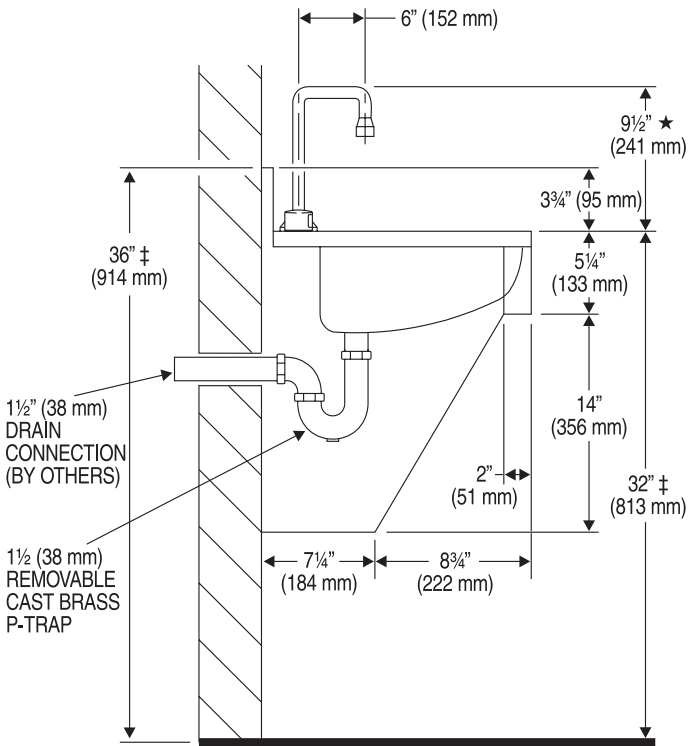
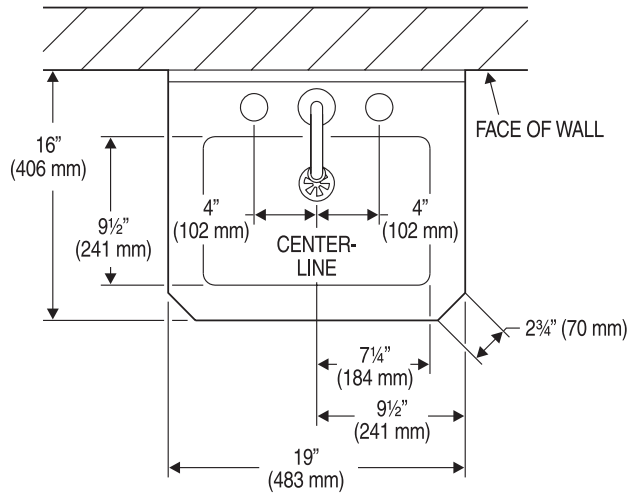
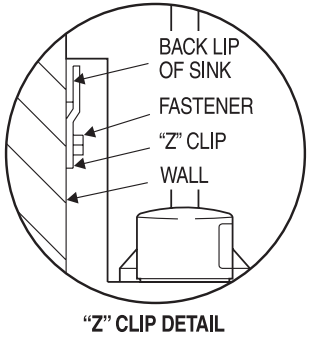
ANCHORING HARDWARE

Anchoring hardware for securing the "Z" clip to the wall and the sink to the wall is not supplied. The "Z" clip is supplied.

SINK LOCATION

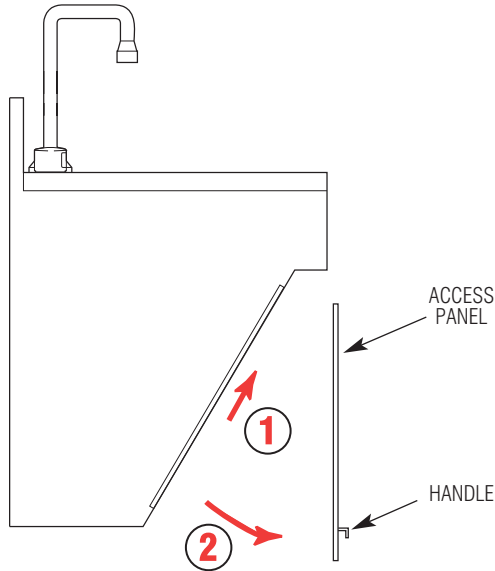
Determine the appropriate location for the Hand Washing Sink. Consider that hot and cold water supply lines, a drain line, and an electrical source (receptacle) will be required. Compare the physical dimensions of the Sink to the space available for installation. If wall is not load bearing, a carrier may be required behind the wall.

SINK ROUGH-IN



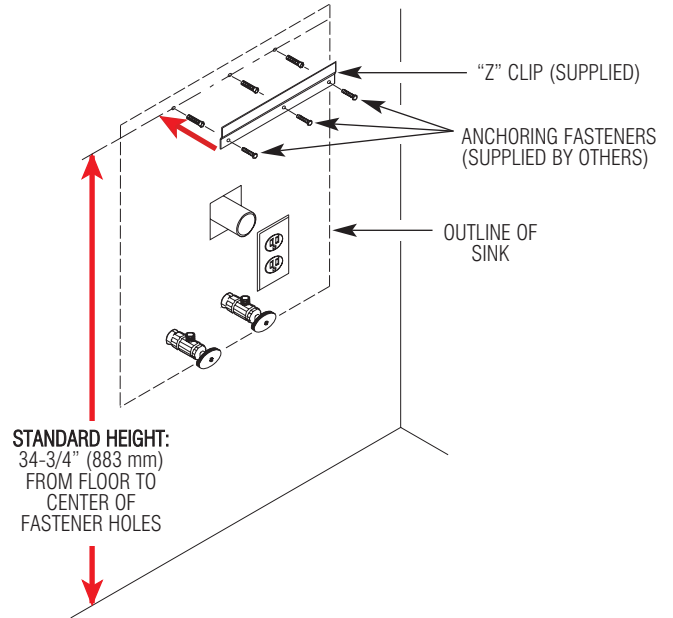
1 Unpack Scrub Sink and Remove Access Panel

- A** Carefully remove Sink from its protective carton. Examine the carton for additional parts before discarding packaging material.
- B** Remove Access Panel from Sink by lifting up on handle and pulling outward. Do not use excessive force. The Access Panel is not attached to the Sink with any fasteners.



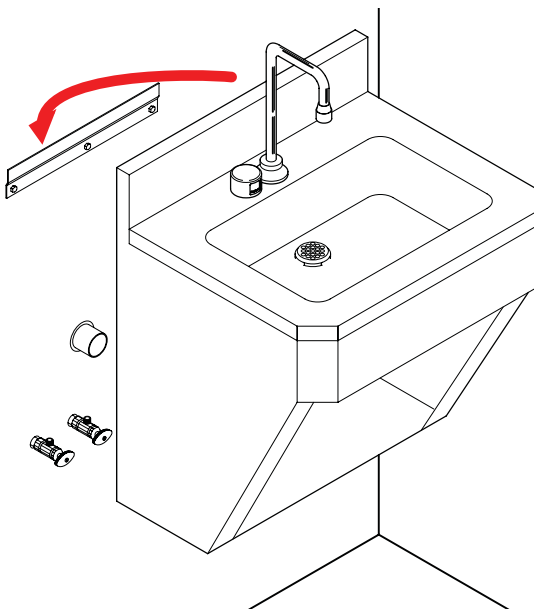
2 Install "Z" Clip to Wall

- A** Install "Z" clip so that mounting holes measure 34-3/4" (883 mm) from floor surface for a standard 32" (813 mm) sink height.
- NOTE:** Mounting height can vary to meet individual installation requirements. Adjust all rough-in and mounting dimensions accordingly.



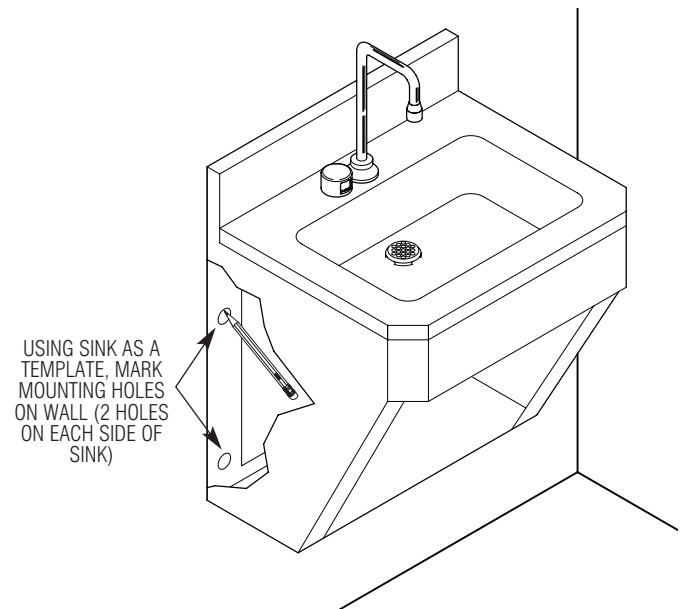
3 Install Sink on Wall

- A** With the help of an assistant, carefully lift and hang the Sink onto the "Z" clip. Position Sink as required.



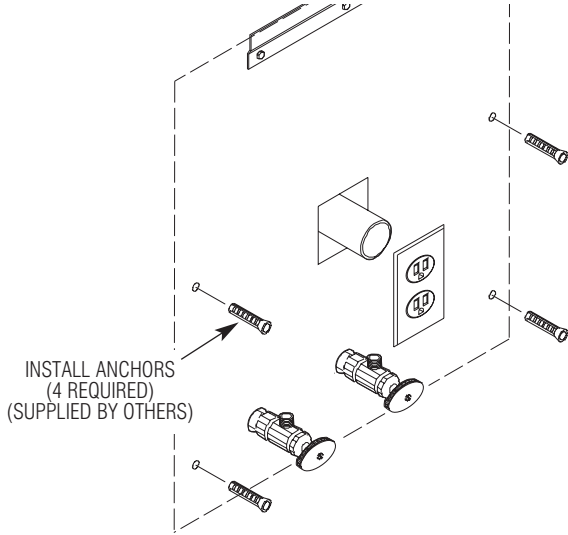
4 Mark Mounting Hole Locations on Wall

- A** Mark all four (4) Anchoring Hole locations using Sink as a template. There are two holes on each side of the Sink.



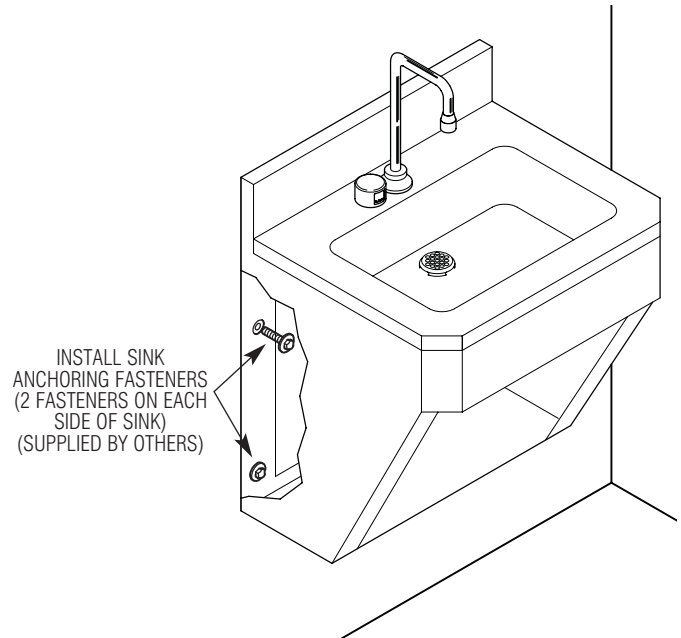
5 Install Anchoring Hardware

- A** Carefully remove Sink from the wall and place in a safe location.
- B** Bore a 1" (25 mm) diameter hole into the wall at each of the four (4) Anchoring Hole locations marked.
NOTE: Mounting height can vary to meet individual installation requirements. Adjust all rough-in and mounting dimensions accordingly.
- C** Install the four (4) Anchors for sink as instructed in the Anchor Manufacturer's Installation Instructions.



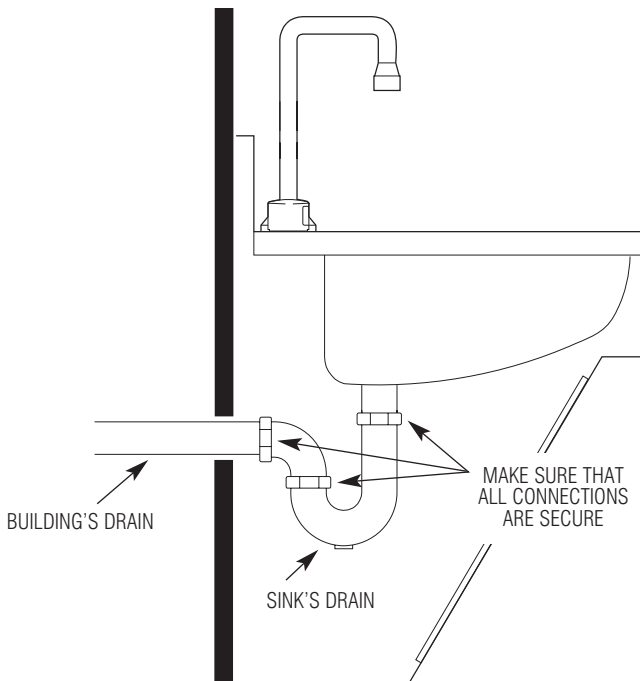
6 Mount Sink to Wall

- A** With the help of an assistant, carefully lift and re-hang the Sink onto the "Z" clip. Position Sink so that the four (4) mounting holes are aligned with the wall anchors.
- B** Install and securely tighten the four (4) Anchoring Fasteners.



7 Connect Sink Drain to Building Drain

- A** Connect the sink's Drain Line to the building drain. Make sure that all connections are secure to prevent leaking.

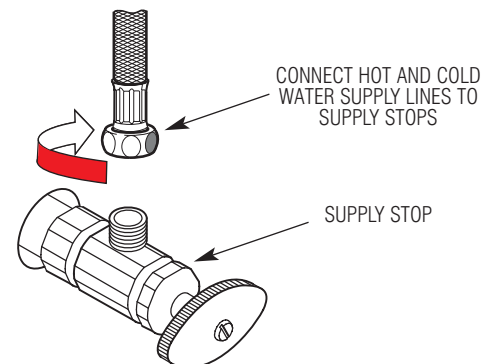


8 Connect Water Supply Lines

IMPORTANT

Before connecting water supply lines to Supply Stops, flush all water lines until water runs clear.

- A** Connect hot and cold water supply lines to Supply Stops. (Supply Stops have a 1/2" male pipe thread inlet.)

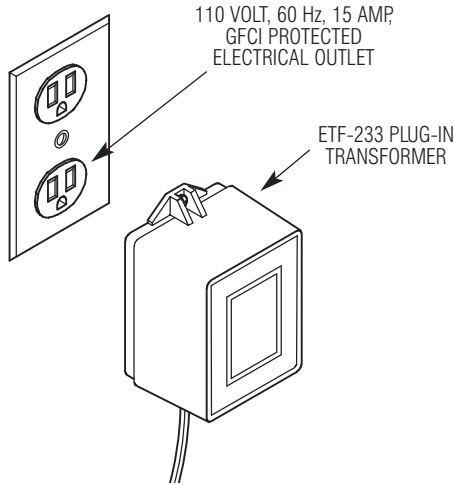


9 Plug Transformer into Receptacle

IMPORTANT

Plug-in Transformer **MUST** be used with a Ground Fault Interrupt (GFCI) Receptacle to help prevent possible electrical shock.

- A** Make sure that power is supplied to the receptacle. Plug the Transformer into the lower receptacle.



10 Start-Up

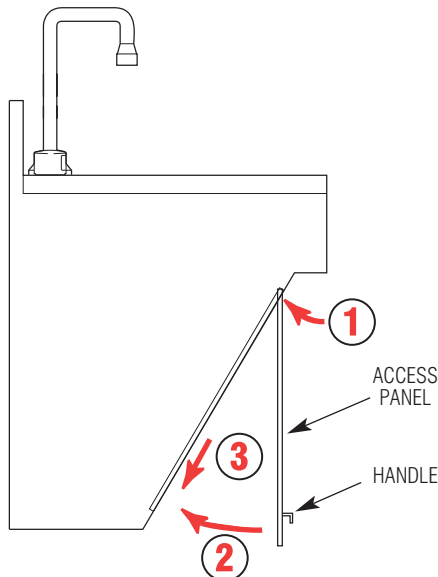
Note: The Control Module is equipped with two LED lights. When power is supplied by the Transformer, one LED will illuminate green. When Sensor is activated, this LED will change to red. A second red LED illuminates when Solenoid Valve is activated.

- A** Remove Aerator or Spray Head from faucet spout. Open Supply Stops. Activate Faucet for thirty (30) seconds by placing hand in front of Sensor. The Solenoid Valve should “click” and water should flow from the Spout. If this does not occur, refer to the Troubleshooting section of this Installation Instructions.
- B** Close Supply Stops. Install Aerator or Spray Head in Spout and tighten securely. Reopen Supply Stops. Activate Faucet and check for leaks.
- C** If the Control Module Cover was removed, reinstall using the Screws supplied.

11 Reinstall Access Panel

NOTE: Do NOT use excessive force to install Access Panel.

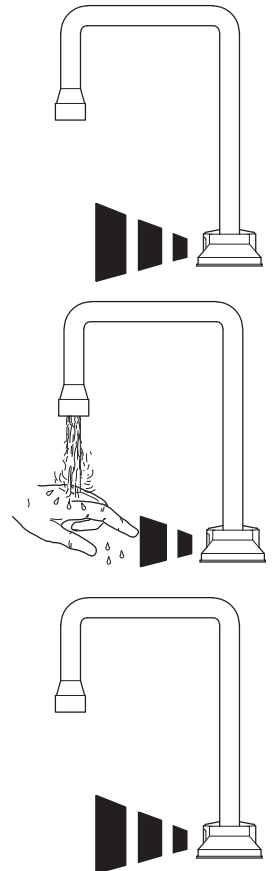
- A** Slide Access Panel up into top slot of Sink frame.
- B** Swing Panel inward until flush with Sink frame.
- C** Lower Panel into bottom slot of Sink Frame.



Faucet Operation

- A continuous invisible beam of infrared light is emitted from the OPTIMA sensor.
- As the user's hands enter the beam's effective range, the beam is reflected back into the sensor receiver and activates the solenoid valve allowing tempered water to flow from the faucet into the sink. Water will flow until the hands are removed or until the faucet reaches its automatic time out limit setting.
- When hands are moved away from the OPTIMA sensor, the loss of reflected light initiates an electrical signal that deactivates the solenoid valve, shutting off the water flow. The circuit then automatically resets and is ready for the next user.

ETF-770 Faucet Shown



TROUBLESHOOTING GUIDE

For Models:

EHS-1080 Hand Washing Sink with ETF-80 Faucet
EHS-1600 Hand Washing Sink with ETF-600 Faucet
EHS-1660 Hand Washing Sink with ETF-660 Faucet

EHS-1700 Hand Washing Sink with ETF-700 Faucet
EHS-1770 Hand Washing Sink with ETF-770 Faucet

Note: Remove Cover from Control Module to check diagnostic lights.

1. PROBLEM: No water is delivered when Faucet is activated.

INDICATOR: If no LED lights illuminate:

CAUSE: No electricity is being supplied to Faucet.

SOLUTION: Ensure that the main power is turned "ON." Check all Transformer, Sensor, Solenoid and Cable Connections. Make sure that Transformer is supplying 24 VAC (Volts AC). If no voltage is detected, replace Transformer.

CAUSE: There is an electrical system malfunction.

SOLUTION: Reset electrical system. Unplug Sensor Connection. Disconnect power to circuit for ten (10) seconds. Reconnect.

INDICATOR: If the GREEN LED does NOT illuminate when power is reconnected:

CAUSE: There is an electrical system malfunction.

SOLUTION: Reset electrical system. Unplug Sensor Connection. Disconnect power to circuit for ten (10) seconds. Reconnect.

CAUSE: The Control Module circuit is "dead."

SOLUTION: Replace ETF-450-A Control Module.

INDICATOR: If GREEN LED illuminates AND changes to RED when hands are in the Sensor's detection zone AND the RED Solenoid LED illuminates:

CAUSE: Water supply stop(s) may be partially closed.

SOLUTION: Open supply stop(s) completely.

CAUSE: Debris is clogging Solenoid Filter.

SOLUTION: Shut off water supply. Remove, clean and reinstall Solenoid Filter.

INDICATOR: If GREEN LED illuminates AND changes to RED when hands are placed in the Sensor's detection zone AND the RED Solenoid LED flickers with a vibrating/clicking noise heard inside the module:

CAUSE: There is a direct short in the Solenoid or Solenoid Cable.

SOLUTION: Replace with ETF-370-A Solenoid.

INDICATOR: If GREEN/RED LED illuminates AND changes to RED when hands are NOT located in the Sensor's detection zone BUT the RED Solenoid LED (in upper left corner of circuit) does NOT illuminate:

CAUSE: Sensor range is set too long and is detecting the sink.

SOLUTION: Reduce Sensor detection range.

CAUSE: Sensor is faulty.

SOLUTION: Replace Sensor.

INDICATOR: If GREEN LED illuminates BUT does NOT change to RED when hands are placed in the Sensor's detection zone:

CAUSE: Sensor range is set too short.

SOLUTION: Increase Sensor detection range.

CAUSE: Sensor is faulty.

SOLUTION: Replace Sensor.

2. PROBLEM: Sensing Range is too short.

CAUSE: Extended Range Sensitivity is required.

SOLUTION: Dip Switch number 4 should be in the "DOWN" (Extended Range Sensitivity) position. Increase range by adjusting Range Potentiometer clockwise (yellow phillips screw in blue base).

CAUSE: Faucet has Surgical Bend Gooseneck Spout.

SOLUTION: For Long Range use (recommended for Surgical Bend Gooseneck Spout Faucet models), remove Range Jumper from upper right hand corner of Circuit Board. Adjust Range Potentiometer.

3. PROBLEM: Faucet activates by itself (false triggers).

CAUSE: Sensor range is set too long.

SOLUTION: Decrease range by adjusting Range Potentiometer counterclockwise. If necessary, flip Dip Switch number 4 to the "UP" (Reduced Range Sensitivity) position. Check surroundings for factors that contribute to Sensor range detection problems (bright lights, highly reflective surfaces, sunlight, etc.).

4. PROBLEM: Faucet delivers very low flow or just a dribble.

CAUSE: Water supply stop(s) may be partially closed.

SOLUTION: Open supply stop(s) completely.

CAUSE: Debris is clogging Solenoid Filter.

SOLUTION: Shut off water. Remove, clean, and reinstall Solenoid Filter.

CAUSE: Solenoid is worn or faulty.

SOLUTION: Rebuild with ETF-1009-A Solenoid Repair Kit or replace ETF-370-A Solenoid.

CAUSE: Debris is clogging Faucet Aerator or Spray Head.

SOLUTION: Shut off water. Remove Aerator or Spray Head (use Key if required). Clean and reinstall Aerator or Spray Head.

5. PROBLEM: Faucet does not stop delivering water or continues to drip after user is no longer detected (even after power to the Module has been disconnected).

CAUSE: Solenoid Valve is installed backward.

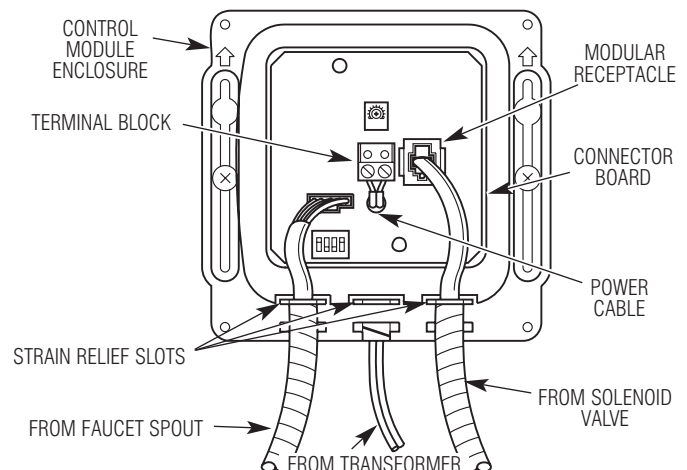
SOLUTION: Disconnect Solenoid. Reconnect Solenoid with water flow toward the Faucet (see arrow on Solenoid).

CAUSE: Debris is clogging Solenoid.

SOLUTION: Remove and clean Solenoid Operator. If necessary, rebuild with ETF-1009-A Repair Kit.

CAUSE: Seat in Solenoid Valve body is damaged or pitted.

SOLUTION: Replace with ETF-370-A Solenoid.



When assistance is required, please contact Sloan Valve Company Installation Engineering Department at:

1-888-SLOAN-14 (1-888-756-2614) OR 1-847-233-2016

TROUBLESHOOTING GUIDE

For Model:

EHS-1750 Hand Washing Sink with EBF-750 Faucet

Note: Remove Cover from Control Module to check diagnostic lights.

1. PROBLEM: Sensor LED does not function (indicator light on sensor window in faucet spout does not flash during initial 10 minute set-up mode).

CAUSE: There is no visible indicator light. Normal operation.

SOLUTION: This is a normal operating feature of the faucet.

2. PROBLEM: Faucet does not deliver any water when Sensor is activated.

INDICATOR: Solenoid valve produces audible “CLICK.”

CAUSE: Water supply stop(s) closed.

SOLUTION: Open supply stop(s) completely.

INDICATOR: Solenoid valve DOES NOT produce an audible “CLICK.”

CAUSE: Solenoid Lead is not properly connected to the Control Module.

SOLUTION: Disconnect and reconnect Solenoid Lead to Control Module.

CAUSE: No battery or Transformer power is being supplied to Sensor.

SOLUTION: Ensure that the batteries are installed properly. Check that the orientation of each battery matches the positive (+) and negative (—) symbols shown at bottom of battery compartment. Reinsert Batteries into Control Module. Transformer (optional) is unplugged or wall receptacle has no power.

CAUSE: Sensor Cable is not properly connected to the Control Module.

SOLUTION: Disconnect and reconnect Sensor Cable to Control Module.

CAUSE: Sensor range is set at minimum distance.

SOLUTION: Increase Sensor range.

CAUSE: Control Module assembly is defective.

SOLUTION: Replace Control Module assembly.

3. PROBLEM: Faucet delivers only a slow flow or dribble when Sensor is activated.

CAUSE: Water supply stop(s) partially closed.

SOLUTION: Open supply stop(s) completely.

CAUSE: Solenoid Filter is clogged.

SOLUTION: Remove, clean and reinstall Filter.

CAUSE: Aerator or Spray Head is clogged.

SOLUTION: Remove, clean and reinstall Aerator or Spray Head.

4. PROBLEM: Faucet does not stop delivering water or continues to drip after user is no longer detected (automatic shut-off fails even when batteries are removed).

CAUSE: Solenoid Valve has been connected backwards.

SOLUTION: Disconnect Solenoid Valve compression fittings at both the inlet and outlet positions. The water should flow from inlet through the Solenoid Valve to the outlet according to the direction of the arrow shown on the side of the Solenoid Valve. Reconnect the compression fittings in the correct orientation.

CAUSE: Solenoid Valve is dirty.

SOLUTION: Backflush by reversing water flow (opposite to the direction shown by the arrow on the side of the Solenoid Valve) through the Solenoid Valve. Reconnect the compression fittings in the correct orientation. Activate faucet.

CAUSE: Solenoid Valve Module is defective.

SOLUTION: Replace Solenoid Valve Module.

5. PROBLEM: The water temperature is too hot or too cold on a faucet connected to hot and cold supply lines with Bak-Chek® Tee.

CAUSE: Supply stops are not adjusted properly.

SOLUTION: Adjust supply stops.

NOTE: For some systems, a Thermostatic Mixing Valve may be required.

6. PROBLEM: Red LED turns on in the control module (below deck).

CAUSE: One (or more) of the batteries is “dead.”

SOLUTION: To ensure proper operation, insert four (4) new AA-size Alkaline batteries. Check that the orientation of each battery matches the positive (+) and negative (—) symbols shown on the bottom of the battery compartment. Reinsert Batteries into the Control Module.

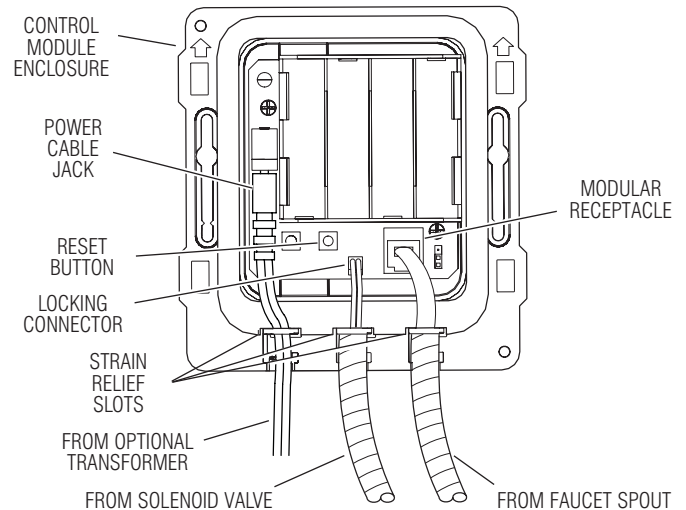
NOTE: Upon start-up mode (1st ten minutes) the control module circuitry tests the batteries and the Red LED turns on if the battery voltage is low. No Red LED light indicates normal battery voltage.

NOTE: If reset button is pressed (initiates start up mode/1st ten minutes), the battery voltage is checked. If voltage is too low, product is stopped from operating and Red LED will turn on. No Red LED light indicates normal battery voltage.

7. PROBLEM: Green LED initially turns on in the control module (below deck) during start up mode, then will not appear again.

CAUSE: For the 1st ten minutes of operation (batteries inserted or reset button pressed) the Green LED will turn on when there is a target present (hands in front of sensor). After ten minutes, the Green LED will no longer turn on.

SOLUTION: This is a normal operating feature of the faucet.



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