

## **OPTIMA**<sup>®</sup>

### INSTALLATION INSTRUCTIONS FOR SENSOR ACTIVATED LAVATORY FAUCETS



### Model ETF-80 24 VAC, Sensor Activated Lavatory Faucet

Furnished with a Black Plastic Throat Plate

Compliant to: ASME A112.18.1 and CSA B125.1



® Certified



sted UPC

® Listed by I.A.P.M.O.





# Model ETF-880 24 VAC, Sensor Activated Lavatory Faucet Furnished with a Chrome Plated Metal Throat Plate

Compliant to: ASME A112.18.1 and CSA B125.1



® Listed by I.A.P.M.O.



#### LIMITED WARRANTY

Sloan Valve Company warrants its Optima ETF-80 and ETF-80 Faucets 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 (1 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.

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**

Prior to installing the Sloan ETF-80 or ETF-880 Faucet, install the items listed below. Also, refer to the Rough-In illustrations on Page 2.

- When Using Plug-In Transformer Install electrical receptacle for plug-in transformer (120 VAC, 2 amp service for each ETF-233 (24 VAC, 35 VA) plug-in transformer used).
- When Using Box Mount Transformer Install electrical wiring to transformer location (120 VAC, 2 amp service for each EL-248-40 (24 VAC, 40 VA) transformer used).
- Lavatory/sink
- Drain line
- Hot and cold water supply lines or tempered water supply line

#### **Multiple Faucets**

Multiple faucets can be powered by a single transformer, provided that the transformer has been properly sized. Allow a minimum of 15 VA of current rating for each solenoid valve used. Refer to "Step 4 — Install Transformer" for further information.

#### Mixing Valve

When installing the faucet with a Sloan mixing valve, these Installation Instructions AND the Installation Instructions packaged with the mixing valve MUST be followed.

#### Important:

- INSTALL ALL ELECTRICAL WIRING IN ACCORDANCE WITH NATIONAL/LOCAL CODES AND REGULATIONS.
- INSTALL ALL PLUMBING IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- A 24 VAC STEP-DOWN TRANSFORMER 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 UNTIL WATER IS CLEAR BEFORE CONNECTING SOLENOID TO SUPPLY STOPS.

### DO NOT INSTALL THE SPRAY HEAD UNTIL AFTER THE SUPPLY LINES HAVE BEEN FLUSHED.

#### **BAK-CHEK® TEE USAGE**

When connecting the Sloan ETF-80 or ETF-880 Faucet to both hot and cold water supplies, a Bak-Chek® Tee is provided and required as illustrated in the Rough-in drawings on Page 2. Water temperature can be controlled by adjusting the supply stops.

When connecting the faucet to a single line water supply or a pre-tempered water supply, a Bak-Chek® Tee is not required.

A Bak-Chek® Tee is not required or provided when a Temperature Mixing Valve is included with the faucet.

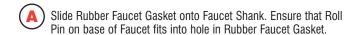
#### **TOOLS REQUIRED FOR INSTALLATION**

- Open end wrenches for hex sizes: 1", 5/8", 9/16" and 1/2"
- · Basin wrench
- Slotted screwdriver, 3/16"
- Slotted screwdriver (supplied)
- Phillips head screwdriver. #2
- Pliers
- Wire stripper/crimping tool

# Install Faucet Spout and Trim Plate — Refer to the appropriate step (1A-1C) for your application.

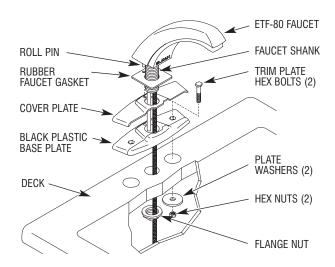
**Note:** When installing with a Sloan Mixing Valve, install Faucet and Trim Plate before installing Mixing Valve. For complete installation guidelines, refer to the Installation Instructions supplied with the Sloan mixing valve.

## **1** A ETF-295-A (for ETF-80) Single Hole 4" Trim Plate



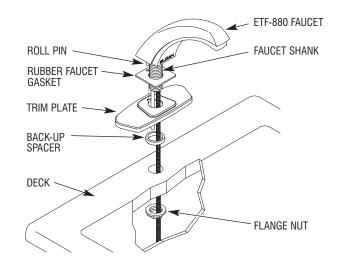
**Note:** If Trim Plate is used on a sink with a center hole only, Trim Plate Bolts are not used. Apply plumber's putty to underside of Trim Plate to prevent Faucet from rotating.

- Insert Hex Bolts into Black Plastic Base Plate (if sink has only a center hole, see note above). Place Chrome Cover Plate over Black Plastic Base Plate. Slide Trim Plate assembly onto Faucet Shank. Align Roll Pin with small hole in Trim Plate assembly.
- Insert Trim Plate Bolts through the 4 inch (102 mm) spread deck holes and Faucet Shank through the 1 inch (25 mm) minimum diameter deck hole. Secure Trim Plate to Deck using the large Plate Washers and Hex Nuts supplied. Secure Faucet from below Deck using the Flange Nut supplied.



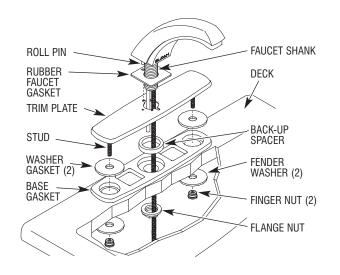
# **1** B ETF-662-A (for ETF-880) Single Hole 4" Trim Plate

- Slide Rubber Faucet Gasket onto Faucet Shank. Ensure that Roll Pin on base of Faucet fits into hole in Rubber Faucet Gasket.
- Slide Trim Plate and Back-up Spacer onto Faucet Shank. Align Roll Pin with small slot in Trim Plate.
- C Secure Faucet from below Deck using the Flange Nut supplied.



# 1 C ETF-510-A (for ETF-80/880) Single Hole 8" Trim Plate

- Slide Rubber Faucet Gasket onto Faucet Shank. Ensure that Roll Pin on base of Faucet fits into hole in Rubber Faucet Gasket.
- Slide Trim Plate and Back-up Spacer onto Faucet Shank. Align Roll Pin with small slot in Trim Plate.
- Slide Washer Gaskets over Studs. Place Studs and Faucet Shank through Base Gasket and holes in Deck.
- Secure Trim Plate from below Deck using the two (2) Fender Washers and two (2) Finger Nuts supplied.
  - E) Secure Faucet from below Deck using the Flange Nut supplied.

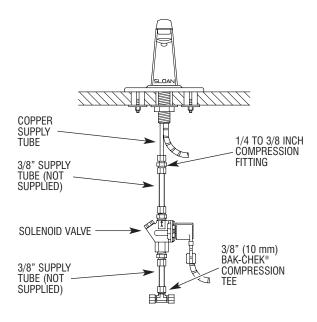


#### **Install Solenoid Valve**

Note: Flow direction of Solenoid Valve is indicated by an arrow on the Valve Body.



Install the 1/4 inch end of the 1/4 to 3/8 inch Compression Fitting onto the Spout's copper Supply Tube. Connect 3/8 inch O.D. Supply Tube between Compression Connection on Solenoid Valve and Compression Fitting on Spout's copper Supply Tube.



### **Connect Supply Line(s) from Supply Stop to Solenoid Valve Inlet**

Important: Keep thread sealant out of your waterway and prevent component part damage! Do not use sealant on compression fittings. When thread sealant is used, do not apply it to the first two "starter" threads. SOLENOID



For Dual Line Hot and Cold Water **Supply Applications** 

Install a 3/8 inch (10 mm) copper supply tube between Bak-Chek® Compression Tee and hot and cold supply stops. (Supply stops and copper supply tube furnished by installer.) Install a 3/8 inch (10 mm) copper Ender not supply tube between Bak-Chek® Compression Tee and inlet side of Solenoid Valve. Tighten Compression Fittings securely. 3/8" (10 mm)

Note: Failure to install the Bak-Chek® Tee can result in a cross flow connection 8 when the faucet is off and the supply stops are open. If pressure of the hot and cold water supply differ, hot water can migrate into the cold water supply or vice-versa. Most plumbing codes require that the Bak-Chek® be used to prevent this.



For Single Line Water Supply Applications Install a 3/8 inch (10 mm) copper supply tube between the supply stop and inlet side of Solenoid Valve. (Supply stop and copper supply tube furnished by installer.) Tighten Compression Fittings securely.

9 3/8" (10 mm) SUPPLY TUBÉ 3/8" (10 mm) COMPRESSION FITTING **SUPPLY** ST<sub>O</sub>P

VALVE

3/8" (10 mm)

SUPPLY TUBÉ

3/8" (10 mm) COMPRESSION

FITTING

SUPPLY

ST<sub>O</sub>P

SOLENOID

VALVE

8

9

BAK-CHEK® TÉE USED ON DUAL

WATER SUPPLY

**APPLICATIONS** 

ONLY

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CONTROL

MODULE

Important: Flush dirt, debris, and sediment from the supply line(s).



### **Install Transformer**

#### **Multiple Faucets**

Multiple faucets can be powered by a single transformer that has been properly sized. Allow a minimum of 15 VA of current rating for each solenoid valve used. Refer to the following example to determine the required current rating for 3 OPTIMA faucets.

#### Example:

Total number of OPTIMA faucets: 3 3 Total number of solenoid valves: Multiply by current rating: 15 VA

Minimum current rating of required transformer: 45 VA

Transformers Available with the ETF-80 and ETF-880 Faucets

Standard Plug-In † ETF-233 120 VAC 35 VA Standard Box Mount EL-248-40 120 VAC 40 VA

† In Canada, use ETF-416 (120 VAC, 35 VA).

**Optional Transformers Available from Sloan** 

120 VAC Box Mount EL-154 50 VA Foot Mount EL-208 120 VAC 100 VA **Box Mount** EL-342 240 VAC 50 VA

All Sloan transformers are 50/60 Hz.

Other transformers (not supplied by Sloan) may be used provided they meet UL requirements for Class 2 transformers.

#### PLUG-IN TRANSFORMERS

Important: DO NOT plug Transformer into receptacle until all wiring has been completed. The Transformer is supplied with a 10 foot Cable; however, this Cable can and should be shortened to meet installation requirements.



Strip ends of Transformer Power Cable approx. 3/16 to 1/4 inch (5 to 6 mm).



Install Strain Relief 3 inches (76 mm) from one end of Power Cable.



Insert Power Cable and Strain Relief into hole at back of Control Module. Install right angle Strain Relief so that Power Cable enters the Control Module from the bottom.

**Important:** Twist stranded ends of Power Cable before inserting into Terminal Block. Fraying of Stranded Power Cable Wire can cause a short and damage the Control Module and Transformer when powered.



Connect Power Cable to Terminal Block on Connector Board. See Step 6. TRANSFORMER TERMINALS



Install Crimp Connectors and connect Power Cable ends to Transformer Terminals.



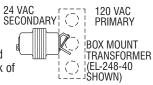
#### **BOX MOUNT TRANSFORMER**

Important: DO NOT supply power to primary side of Transformer until wiring is completed.

Mount Transformer on a metal electrical junction box (supplied by others). ("J" box should be mounted inside chase wall or above ceiling.) Install Transformer within 50 feet (15.24 meters) of Faucet. 18 gauge wire is recommended.



Run wires from secondary side of Transformer to 3/8 inch (10 mm) hole at back of Control Module Enclosure. If necessary, wires can be run through wall and then inserted through hole in back of Control Module Enclosure.



### 5

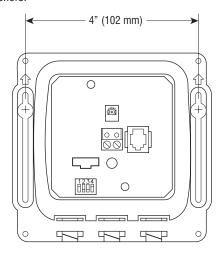
#### **Mount Control Module to Wall**



Install the Control Module in an appropriate location as shown in Rough-in. Control Module must be installed so that all cables enter from the bottom of the unit. When installed, Cables from the Spout and Solenoid Valve to the Control Module should have some slack.



Mount Control Module to wall using Mounting Screws and Plastic Anchors.



#### **EXTENSION CABLES**

Extension Cables are available as an option from Sloan to allow for installing the Control Module remote from the Faucet Spout and Solenoid Valve. Refer to the Parts List for available lengths.



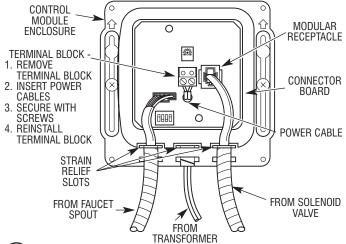
### **Control Module Connections**



Route Cables from Solenoid Valve and Spout to the Control Module.



Insert Solenoid Valve Connector into the Modular Receptacle on Connector Board.



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Insert Locking Connector from Faucet Spout into mating Receptacle on Connector Board. Allow 3 to 4 inches (76 to 102 mm) of Cable to extend into the Control Module.



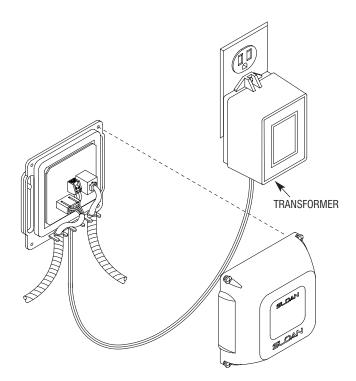
Insert each Conduit Cable into a strain relief slot in the Control Module.

# 7

### **Plug In Transformer**



Plug Transformer into 120 VAC Receptacle.



# 8

### Start-Up



Supply power to Transformer.

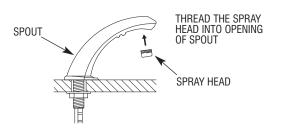
**Note:** The Control Module is equipped with two LED lights. When power is supplied by the Transformer, one LED will illuminate green. When Sensor is activated, this LED will change to red. A second red LED illuminates when Solenoid Valve is activated.



Open Supply Stop(s). With Aerator removed, activate Faucet for 30 seconds by placing hands 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.



Close Supply Stop(s) and install Spray Head in Spout using the Key provided. Reopen Supply Stop(s), activate Faucet and check for leaks.



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### **Range Adjustment**

The OPTIMA ETF-80 and ETF-880 Faucets are factory set to operate when hands are placed 4 to 5 inches (102 to 127 mm) below the spray head. This range should be satisfactory for most installations.

If range adjustment is required, refer to the following range adjustment procedures.

#### TO MAKE A RANGE ADJUSTMENT

The Range Potentiometer and Dip Switches are located in Control Module. *Important:* Range Potentiometer adjustment screw rotates only 3/4 of a turn. DO NOT over-rotate.

Make certain that Dip Switch number 4 is in the UP position. Using the small screwdriver provided, adjust Range Potentiometer clockwise until green (power ON) indicator LED turns red (Faucet is now picking up sink). Adjust Range Potentiometer back counterclockwise until red LED returns to green. Range is now at maximum.

Cycle Faucet several times to assure that range as adjusted will not inadvertently pick up IR reflection in lavatory. If IR reflection occurs (green LED will flicker red), adjust Range Potentiometer counterclockwise very slightly and again cycle Faucet.

Repeat range adjustment counterclockwise until length of range is at bowl rim of lavatory (plus or minus 1 inch (25 mm)).

#### **Time Out Adjustment**

The Faucet Time Out Setting determines the maximum time the Faucet will run upon continuous activation. This timing can be changed to meet individual application requirements.

Refer to Table 1 or label on cover of Control Module along with the following instructions to set the desired Time Out. The Dip Switches used to set the Time Out are located in the Control Module.

Set the Time Out by configuring the number 1, 2 and 3 Dip Switches as shown in Table 1.

Table 1 — Time Out Settings

Time Out	Dip Switch Setting			
Time out	Switch #1	Switch #2	Switch #3	
3 SECONDS	UP	UP	DOWN	
6 SECONDS	DOWN	DOWN	UP	
12 SECONDS	UP	DOWN	UP	
30 SECONDS	UP	DOWN	DOWN	
45 SECONDS	UP	UP	UP	
1 MINUTE	DOWN	UP	UP	
3 MINUTES	DOWN	DOWN	DOWN	
20 MINUTES	DOWN	UP	DOWN	

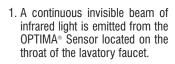
Unless otherwise specified, all ETF-80 and ETF-880 Faucets leave the factory set with a 30 second Time Out.

**Note:** The position of Dip Switch #4 (range enhancer setting) does not affect Faucet Time Outs.

Push Cables into slots at the bottom of the Control Module.

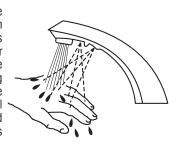
Install Control Module Cover using Screws provided. Refer to illustration in Step 7.

# **10** Test Faucet Operation

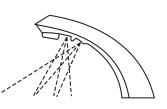




2. As the user's hands enter the beam's effective range (beneath the spray head), the beam is reflected back into the sensor receiver and activates the solenoid valve allowing tempered water to flow from the faucet into the sink. Water will flow until the hands are removed or until the faucet reaches its automatic time out limit setting.



3. 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.



### CARE AND CLEANING OF CHROME AND SPECIAL FINISHES

DO NOT use abrasive or chemical cleaners (including chlorine bleach) to clean faucets that may dull the luster and attack the chrome or special decorative finishes. Use ONLY soap and water, then wipe dry with clean cloth or towel.

When cleaning the bathroom tile, protect the faucet from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating.

#### TROUBLESHOOTING GUIDE

**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:

No electricity is being supplied to Faucet. CAUSE:

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.

Reset electrical system. Unplug Sensor Connection. SOLUTION:

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:

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

SOLUTION: Open supply stop(s) completely. Debris is clogging Solenoid Filter. CAUSE:

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

Solenoid Filter.

If GREEN LED illuminates AND changes to RED when INDICATOR: 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.

Replace with ETF-370-A Solenoid. SOLUTION:

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.

Sensor is faulty. CAUSE: 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.

Sensor is faulty. CAUSE: 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).

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

CAUSE: Sensor range is set too long.

Decrease range by adjusting Range Potentiometer SOLUTION:

> 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.

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

Filter or replace Solenoid Filter ETF-1009-A.

CAUSE: Solenoid is worn or faulty.

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

ETF-370-A Solenoid.

CAUSE: Debris is clogging Faucet Aerator or Spray Head.

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

Faucet does not stop delivering water or continues to 5.PROBLEM:

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,

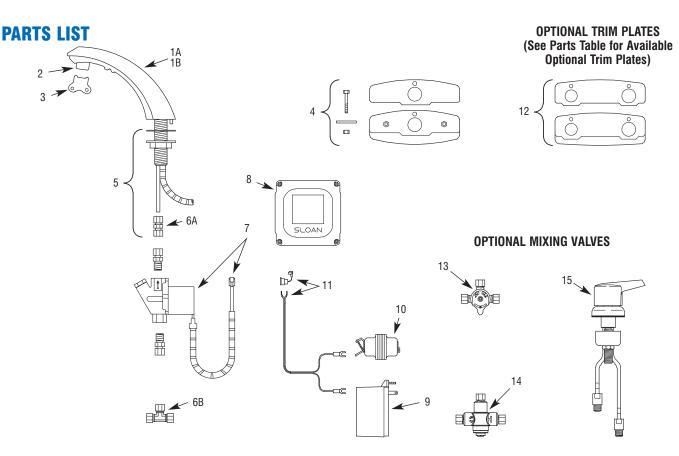
rebuild with ETF-1009-A Repair Kit.

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



Item No.	Part No.	Description
1A	ETF-250-A ETF-631-A	Faucet/Sensor Assembly (ETF-80) Throat Plate Sensor Assembly Only (for ETF-80 Faucets manufactured after October 2003, identified by an all white Sloan name on Sensor) For ETF-80 faucets manufactured prior to October 2003 (identified by a white and red Sloan name on throat plate),
		sensor assembly discontinued. Use ETF-250 Faucet/Sensor assembly.
1B	ETF-625-A	Faucet/Sensor Assembly (ETF-880)
	ETF-628-A	Throat Plate Sensor Assembly Only (ETF-880)
2	ETF-1021-A	0.5 gpm (1.9 Lpm) Spray Head with Key
	ETF-1022-A	2.2 gpm (8.3 Lpm) Aerator Spray Head with Key
3	ETF-1028-A ETF-435	1.5 gpm (5.7 Lpm) Laminar Flow Spray Head Key (Not Required for ETF-1028-A Laminar Flow Spray Head)
4	ETF-295-A	4" (102 mm) Centerset Trim Plate Kit for ETF-80 Faucet (Faucet Only) includes two (2) Nuts, two (2) Hex Screws, two (2) Flat Washers, Single Hole CP Cover Plate and Black Plastic Base Plate
_	ETF-662-A	4" (102 mm) Centerset Trim Plate Kit for ETF-880 Faucet (Faucet Only) includes Back-up Spacer (not shown)
5	ETF-290-A	Faucet Mounting Kit, Includes Rubber Gasket, Flange Nut and ETF-297 1/4" to 3/8" Compression Fitting Connector
6A	ETF-297	1/4" to 3/8" Compression Fitting Connector
6B	ETF-617-A	3/8" Bak-Chek® Tee Compression Fitting
7	ETF-370-A	Solenoid Valve, 24 VAC, Includes Wire Harness
8 9	ETF-450-A ETF-233	Control Module Assembly Plug-In Transformer
10	EL-248-40	Box Mount Transformer
11	ETF-458-A	Power Cable (Transformer to Control Module) with Strain Relie and two (2) Crimp Connectors

For additional information about Sloan Mixing Valves or Trim Plates, consult our Installation Instructions and Maintenance Guides.

If further assistance is required, please contact the Sloan Valve Company Installation Engineering Department at 1-888-SLOAN-14 (1-888-756-2614).

Item No.	Part No.	Description		
OPTIO	ONAL TRIM PLA	TES		
12	ETF-299-A	4" (102 mm) Centerset Trim Plate Kit for ETF-80 Faucet with Optional Mixing Valve includes Dual Hole CP Cover Plate and Black Plastic Base Plate		
_	ETF-510-A	8" (203 mm) Centerset Trim Plate Kit for ETF-80 and ETF- 880 Faucet (Faucet Only) includes two (2) Finger Nuts, two (2) Washer Gaskets, two (2) Fender Washers, Base Gasket, Back-up Spacer and CP Single Hole Trim Plate Assembly (not shown)		
_	ETF-104-A	8" (203 mm) Centerset Trim Plate Kit for Faucet with Optional Mixing Valve (not shown)		
OPTIO	DNAL MIXING V	ALVES		
13	MIX-60-A	Below Deck Mechanical Water Mixing Valve (BDM Variation)		
14	MIX-135-A	Below Deck Thermostatic Water Mixing Valve (BDT Variation)		
15	MIX-110-AA	Optimix* Deck Mounted Water Mixing Valve (ADM Variation)		
FAUC	ET CABLE EXT	ENSION CORDS		
Faucet to Control Module ETF-1005-26 26 Inch (0.7 meter) Length		Solenoid to Cor ETF-1003-36	ntrol Module 36 Inch (0.9 meter) Length	
ETF-10		.9 meter) Length .8 meter) Length 2.7 meter) Length	ETF-1003-48 ETF-1003-72 ETF-1003-108	48 Inch (1.2 meter) Length 72 Inch (1.8 meter) Length 108 Inch (2.7 meter) Length
SOLE	NOID VALVE RI	PAIR KITS		

NOTICE: The information contained in this document is subject to change without notice.

Solenoid compression fitting kit

Solenoid repair kit

ETF-1009-A

ETF-437-A

