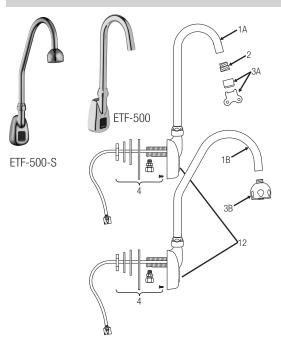
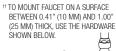
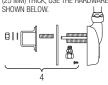


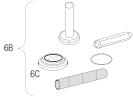
## **OLD Optima® ETF-500/ETF-500-S Faucets**

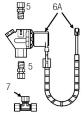
(Prior to 8-1-2018)

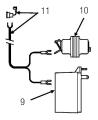












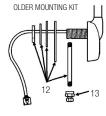




## **New Base Gasket**

The new base gasket (in production since October 1999) is shown at right. An older base gasket design did not have the u-shaped drainage hole.





## PARTS LIST-ETF-500 FAUCET

| Spout   | Item<br>No. | Code No. | Part No.     | Description   |
|---|-------------|----------|--------------|---|
| Gooseneck Spout  2. 0305784 ETF-178 Aerator Adapter for Spray Heads (not required for AC-55-A Shower Spray Head)  3A. 0365147 ETF-621-A 2.2 gpm (8.3 Lpm) Aerator Spray Head with Key (female thread)  0365793 ETF-839 0.35 gpm (1.3 Lpm) Multi-Lam Spray Head 0305927 ETF-435 Replacement Key ONLY  3B. 0328134 AC-55-A Shower Spray Head Assembly, 2.2 gpm (8.3 Lpm)  4. 0315060 EBF-110-A Faucet Mounting Kit includes Base Gasket, large Flat Washer, large Lock Washer, large Lock Washer, large Lock Washer, small Nut, Anti-Rotation Screw, and Compression Fitting Connector (male)  - 0365152 ETF-591 1//8" NPT Pipe to 3/8" Tube Male Compression Fitting Connector (male)  5. 3365676 ETF-437-A Single Solenoid Supply Kit includes, two (2) Compression Fittings, Compression Nut, and Ferrule  6A. 0305849 ETF-370-A 24 VAC Solenoid Valve Assembly includes 18" (457 mm) armored Cable and two (2) Terminal Housings  6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Includes Strain Relief and two (2) Terminal Crimp Connectors | 1A.         | 0365778  | ETF-772-A-ST | Faucet/Sensor Assembly with Standard Gooseneck Spout  |
| AC-55-A Shower Spray Head)  3A. 0365147 ETF-621-A 2.2 gpm (8.3 Lpm) Aerator Spray Head with Key (female thread)  0365793 ETF-839 0.35 gpm (1.3 Lpm) Multi-Lam Spray Head  0305927 ETF-435 Replacement Key ONLY  3B. 0328134 AC-55-A Shower Spray Head Assembly, 2.2 gpm (8.3 Lpm)  4. 0315060 EBF-110-A Faucet Mounting Kit includes Base Gasket, large Flat Washer, large Lock Washer, large Nut, Mounting Spacer, Mounting Stud, small Flat Washer, small Lock Washer, small Nut, Anti-Rotation Screw, and Compression Fitting Connector (male)  - 0365152 ETF-591 1/8" NPT Pipe to 3/8" Tube Male Compression Fitting Connector  5. 3365676 ETF-437-A Single Solenoid Supply Kit includes, two (2) Compression Fittings, Compression Nut, and Ferrule  6A. 0305849 ETF-370-A 24 VAC Solenoid Valve Assembly includes 18" (457 mm) armored Cable and two (2) Terminal Housings  6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module includes Strain Relief and two (2) Terminal Crimp Connectors   | 1B.         | 0365783  | ETF-772-A-SU |   |
| (female thread)  0365793 ETF-839 0.35 gpm (1.3 Lpm) Multi-Lam Spray Head  0305927 ETF-435 Replacement Key ONLY  3B. 0328134 AC-55-A Shower Spray Head Assembly, 2.2 gpm (8.3 Lpm)  4. 0315060 EBF-110-A Faucet Mounting Kit includes Base Gasket, large Flat Washer, large Lock Washer, large Nut, Mounting Spacer, Mounting Stud, small Flat Washer, small Lock Washer, small Nut, Anti-Rotation Screw, and Compression Fitting Connector (male)  — 0365152 ETF-591 1/8" NPT Pipe to 3/8" Tube Male Compression Fitting Connector (male)  5. 3365676 ETF-437-A Single Solenoid Supply Kit includes, two (2) Compression Fittings, Compression Nut, and Ferrule  6A. 0305849 ETF-370-A 24 VAC Solenoid Valve Assembly includes 18" (457 mm) armored Cable and two (2) Terminal Housings  6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Includes Strain Relief and two (2) Terminal Crimp Connectors  | 2.          | 0305784  | ETF-178      | 1 7 7   |
| 305927 ETF-435 Replacement Key ONLY   | 3A.         | 0365147  | ETF-621-A    |   |
| 3B. 0328134 AC-55-A Shower Spray Head Assembly, 2.2 gpm (8.3 Lpm 0315060 EBF-110-A Faucet Mounting Kit includes Base Gasket, large Flat Washer, large Lock Washer, large Nut, Mounting Spacer, Mounting Stud, small Flat Washer, small Lock Washer, small Nut, Anti-Rotation Screw, and Compression Fitting Connector (male)  — 0365152 ETF-591 1/8" NPT Pipe to 3/8" Tube Male Compression Fitting Connector (male)  5. 3365676 ETF-437-A Single Solenoid Supply Kit includes, two (2) Compression Fittings, Compression Nut, and Ferrule  6A. 0305849 ETF-370-A 24 VAC Solenoid Valve Assembly includes 18" (457 mm) armored Cable and two (2) Terminal Housings  6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Includes Strain Relief and two (2) Terminal Crimp Connectors   |             | 0365793  | ETF-839      | 0.35 gpm (1.3 Lpm) Multi-Lam Spray Head   |
| 4. 0315060 EBF-110-A Faucet Mounting Kit includes Base Gasket, large Flat Washer, large Lock Washer, large Nut, Mounting Spacer, Mounting Stud, small Flat Washer, small Lock Washer, small Nut, Anti-Rotation Screw, and Compression Fitting Connector (male)  — 0365152 ETF-591 1/8" NPT Pipe to 3/8" Tube Male Compression Fitting Connector  5. 3365676 ETF-437-A Single Solenoid Supply Kit includes, two (2) Compression Fittings, Compression Nut, and Ferrule  6A. 0305849 ETF-370-A 24 VAC Solenoid Valve Assembly includes 18" (457 mm) armored Cable and two (2) Terminal Housings  6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Includes Strain Relief and two (2) Terminal Crimp Connectors  |             | 0305927  | ETF-435      | Replacement Key ONLY  |
| large Flat Washer, large Lock Washer, large Nut, Mounting Spacer, Mounting Stud, small Flat Washer, small Lock Washer, small Nut, Anti-Rotation Screw, and Compression Fitting Connector (male)  — 0365152 ETF-591 1/8" NPT Pipe to 3/8" Tube Male Compression Fitting Connector  5. 3365676 ETF-437-A Single Solenoid Supply Kit includes, two (2) Compression Fittings, Compression Nut, and Ferrule  6A. 0305849 ETF-370-A 24 VAC Solenoid Valve Assembly includes 18" (457 mm) armored Cable and two (2) Terminal Housings  6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only 7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Includes Strain Relief and two (2) Terminal Crimp Connectors  | 3B.         | 0328134  | AC-55-A      | Shower Spray Head Assembly, 2.2 gpm (8.3 Lpm)   |
| Fitting Connector  5. 3365676 ETF-437-A Single Solenoid Supply Kit includes, two (2) Compression Fittings, Compression Nut, and Ferrule  6A. 0305849 ETF-370-A 24 VAC Solenoid Valve Assembly includes 18" (457 mm) armored Cable and two (2) Terminal Housings  6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Includes Strain Relief and two (2) Terminal Crimp Connectors  | 4.          | 0315060  | EBF-110-A    | large Flat Washer, large Lock Washer, large<br>Nut, Mounting Spacer, Mounting Stud, small<br>Flat Washer, small Lock Washer, small Nut,<br>Anti-Rotation Screw, and Compression Fitting<br>Connector (male) |
| Compression Fittings, Compression Nut, and Ferrule  6A. 0305849 ETF-370-A 24 VAC Solenoid Valve Assembly includes 18" (457 mm) armored Cable and two (2) Terminal Housings  6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Includes Strain Relief and two (2) Terminal Crimp Connectors   | _           | 0365152  | ETF-591      |   |
| 6B 3305577 ETF-1009-A Solenoid Valve Repair Kit includes Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Strain Relief and two (2) Terminal Crimp Connectors  | 5.          | 3365676  | ETF-437-A    | Compression Fittings, Compression Nut, and  |
| Replacement Filter, Guide, Armature Spring, Diaphragm and Washer  6C. 3375003 MCR-1003-A Diaphram only  7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module Includes Strain Relief and two (2) Terminal Crimp Connectors  | 6A.         | 0305849  | ETF-370-A    | 18" (457 mm) armored Cable and two (2)  |
| 7. 3365461 ETF-617-A Bak-Chek® "T" Assembly  8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module includes Strain Relief and two (2) Terminal Crimp Connectors  | 6B          | 3305577  | ETF-1009-A   | Replacement Filter, Guide, Armature Spring,   |
| 8. 3365000 ETF-450-A Control Module Assembly includes splashproof Junction Box and Junction Box Mounting Kit  9. 0365534 ETF-233 120V/35VA Plug-In Transformer  10. 0345370 EL-248-40 24V/40VA Box Mount Transformer  11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module includes Strain Relief and two (2) Terminal Crimp Connectors   | 6C.         | 3375003  | MCR-1003-A   | Diaphram only   |
| 9. 0365534 ETF-233 120V/35VA Plug-In Transformer 10. 0345370 EL-248-40 24V/40VA Box Mount Transformer 11. 0365001 ETF-458-A Input Power Cable (Transformer to Control Module includes Strain Relief and two (2) Terminal Crimp Connectors   | 7.          | 3365461  | ETF-617-A    | Bak-Chek® "T" Assembly  |
| 10. <b>0345370</b> EL-248-40 24V/40VA Box Mount Transformer  11. <b>0365001</b> ETF-458-A Input Power Cable (Transformer to Control Module includes Strain Relief and two (2) Terminal Crimp Connectors   | 8.          | 3365000  | ETF-450-A    |   |
| 11. <b>0365001</b> ETF-458-A Input Power Cable (Transformer to Control Module includes Strain Relief and two (2) Terminal Crimp Connectors  | 9.          | 0365534  | ETF-233      | 120V/35VA Plug-In Transformer   |
| includes Strain Relief and two (2) Terminal<br>Crimp Connectors   | 10.         | 0345370  | EL-248-40    | 24V/40VA Box Mount Transformer  |
| 12. <b>0365097</b> ETF-568-A Sensor Only  | 11.         | 0365001  | ETF-458-A    | Crimp Connectors  |
|   | 12.         | 0365097  | ETF-568-A    | Sensor Only   |

## See page 220 for faucet cable extension cords.

- = Not shown in illustration

### **OLD MOUNTING KIT AND FAUCET SHANK**

| 12. | N/A <sup>††</sup> | EBF-110-A | Old Faucet Mounting Kit included 3/8" Water<br>Supply Tube, Base Gasket, large Flat Washer, large<br>Lock Washer, large Nut, and Compression Fitting<br>Connector (order Items 4 and 13 as replacement<br>parts) |
|-----|-------------------|-----------|--|
| 13. | 0365058           | ETF-547   | 1/8" NPT Pipe to 3/8" Tube Female Compression Fitting Connector  |

The new mounting kit (in production since June 1999; Item 4 shown at left) includes parts for installation on both thin and thick surfaces, an ETF-591 male compression fitting, and an anti-rotation screw for installation on sheet metal surfaces less than 0.41" (10 mm) thick. For surfaces between 0.41" (10 mm) and 1.00" (25 mm) thick, use the mounting spacer and mounting stud hardware. The faucet sensor cable is threaded through a groove on the side of the shank.

The older mounting kits (Items 12 and 13) can be identified by a copper supply tube attached to the faucet shank, requires an ETF-547 compression fitting, and threads the faucet sensor cable through the interior of the shank.



# OLD Optima® ETF-500/ETF-500-S Faucets

(Prior to 8-1-2018)

#### TROUBLESHOOTING GUIDE

#### 1. No water is delivered when faucet is activated.

INDICATOR: If no LED lights illuminate:

- A. No electricity is being supplied to faucet. 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.
- B. There is an electrical system malfunction. Reset electrical system. Unplug sensor connection. Disconnect power to circuit for ten (10) seconds. Reconnect.

INDICATOR: If the GREEN LED illuminates when power is reconnected:

- C. There is a short in the Sensor. Replace sensor. Refer to individual faucet parts diagram for appropriate sensor assembly. **NOTE:** GREEN LED may illuminate immediately after sensor disconnection.
- D. There is a short in the solenoid or solenoid cable. Replace ETF-370-A solenoid.

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

- E. There is an electrical system malfunction. Reset electrical system. Unplug sensor connection. Disconnect power to circuit for ten (10) seconds. Reconnect.
- F. The control module circuit is not working properly. 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:

- G. Water supply stop(s) may be partially closed. Open stop(s) if closed.
- H. Debris is clogging solenoid filter. 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: NOTE: Applies only to REVISION 2 MODULES.

I. There is a direct short in the solenoid or solenoid cable. 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:

- J. Sensor range is set too long and is detecting the sink. Reduce sensor detection range.
- K. Sensor is not working properly. Replace sensor. Refer to individual faucet parts diagram for appropriate sensor assembly.

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

- L. Sensor range is set too short. Increase sensor detection range.
- M. Sensor is not working properly. Replace sensor. Refer to individual faucet parts diagram for appropriate sensor assembly.

#### 2. Sensing range is too short.

A. Extended range sensitivity is required. 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).
- B. Faucet has surgical bend gooseneck spout. 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. **NOTE:** Applies only to REVISION 2 MODULES.

#### 3. Faucet activates by itself (false triggers).

A. Sensor range is set too long. Decrease range by adjusting range potentiometer counterclockwise. If necessary, flip dip switch number 4 into 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. Faucet delivers very low flow or just a dribble.

- A. Water supply stop(s) may be partially closed. Open stop(s).
- B. Debris is clogging solenoid filter. Shut off water. Remove, clean, and reinstall solenoid filter.
- C. Solenoid is worn or not working properly. Rebuild with ETF-1009-A solenoid repair kit or replace ETF-370-A solenoid.
- D. Debris is clogging faucet aerator or spray head. Shut off water.
   Use key if required to remove. Then clean and reinstall aerator or spray head

#### 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).

- A. Solenoid valve is installed backward. Disconnect solenoid. Reconnect solenoid with water flow towards the faucet (see arrow on solenoid).
- B. Debris is clogging solenoid. Remove and clean solenoid operator. If necessary, rebuild with ETF-1009-A repair kit.
- C. Seat in solenoid valve body is damaged or pitted. Replace with ETF-370-A solenoid.

When assistance is required, please contact Sloan Technical Support at: 1-888-SLOAN-14 (1-888-756-2614).