



# 59 TP

Write purchase model number here for future reference

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**NOTES:**

For optimum performance of this product, the recommended system pressure is between 20 and 80 PSI static. This product will operate up to a maximum of 125 PSI static per ANSI and CSA requirements. However, it is not recommended the pressure go above 80 PSI. Thermal expansion or leaking pressure reducing valves may require the use of expansion tanks or relief valves to ensure your system never exceeds its maximum intended pressure setting.

**Control Box #0 and #1**

Designed for routine 180°F (82°C) disinfection cycles up to 10 minutes.

**Control Box #8**

High temperature disinfection cycles not recommended for #8 control box as the thermostatic mixing valve limits the higher temperature water flow output.

- Use 3-conductor 18AWG wire between transformer and hardwire converter / driver board earth ground.
- Use Delta Commercial approved transformers and mount the transformer a minimum of 6" (152 mm) away from the Delta driver board enclosure.
- Refer to **Proximity Application Notes** on SpecSelect for installation best practices, proper grounding and wiring diagrams.

INSTALLATION AND SET-UP INSTRUCTIONS		
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**060638A**  
Vandal Resistant Laminar Outlet with Antimicrobial by Agion®  
1.5 GPM (5.7 L/min)

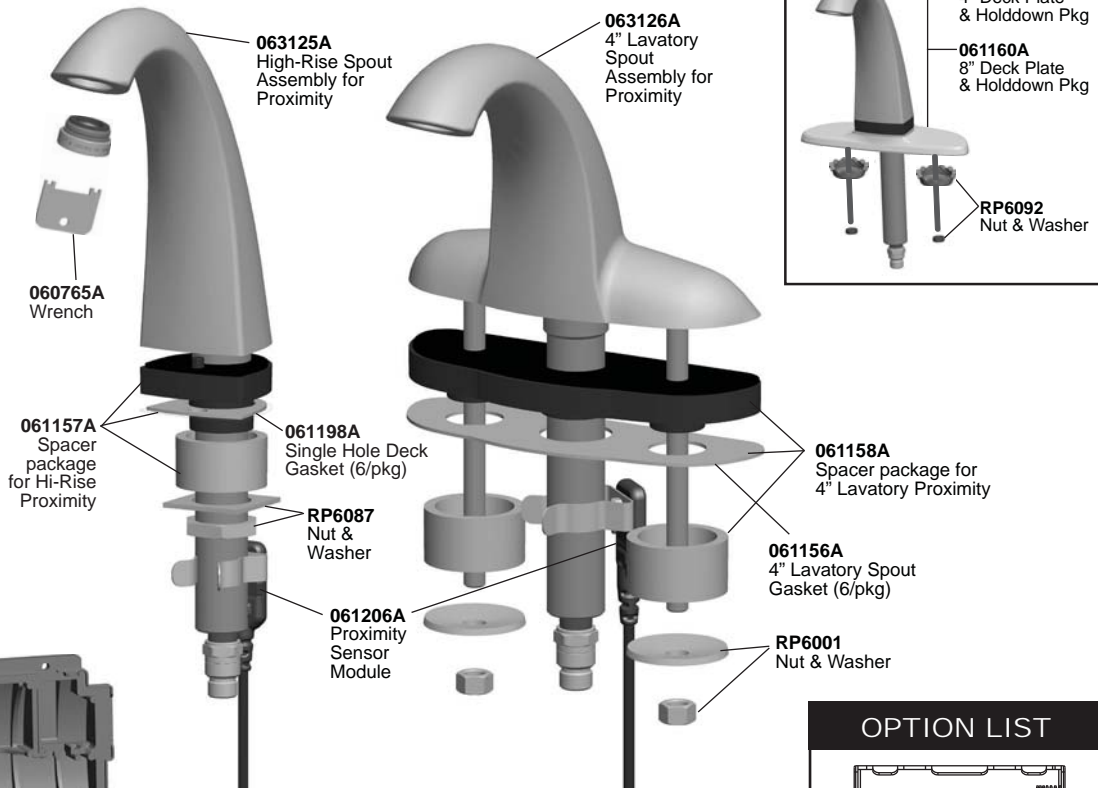
**060640A**  
Vandal Resistant Flow Control Aerator and Wrench  
1.5 GPM (5.7 L/min)

**061203A**  
Vandal Resistant Laminar Outlet with Wrench  
0.5 GPM (1.9 L/min)

**061176A**  
Vandal Resistant Laminar Outlet with Wrench  
1.0 GPM (3.8 L/min)

**061104A**  
Vandal Resistant Flow Control Non-Aerating Spray Outlet with Wrench  
0.35 USGPM (1.3 L/min)

**060642A - Optional**  
Flow Control Aerator  
1.5 GPM (5.7 L/min)



**060905A**  
Cover Gasket

**060906A**  
Surface Mount Housing

**061252A**  
Dual Driver Board

**063128A**  
Battery Box Assembly less driver board and battery holder

**062032A**  
Braided Polymer Hose

**063127A**  
Solenoid Valve with 3/8" Compression Connectors and Solenoid Holder

**060908A**  
Solenoid Holder

**060909A**  
Screen Assembly

**063131A**  
3/8" Comp Connect Nut & Ferrile

**062032A**  
Braided Polymer Hose

**060765A**  
Wrench

**061157A**  
Spacer package for Hi-Rise Proximity

**063125A**  
High-Rise Spout Assembly for Proximity

**061198A**  
Single Hole Deck Gasket (6/pkg)

**RP6087**  
Nut & Washer

**061206A**  
Proximity Sensor Module

**063126A**  
4" Lavatory Spout Assembly for Proximity



**061159A**  
4" Deck Plate & Holddown Pkg

**061160A**  
8" Deck Plate & Holddown Pkg

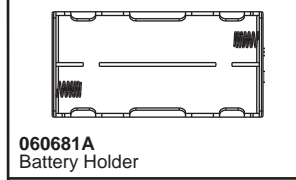
**RP6092**  
Nut & Washer

**061158A**  
Spacer package for 4" Lavatory Proximity

**061156A**  
4" Lavatory Spout Gasket (6/pkg)

**RP6001**  
Nut & Washer

**OPTION LIST**



**TRANSFORMERS**

**060704A**  
Transformer 110 to 24 VAC 20VA up to 5 Electronic Valves

**060771A**  
Transformer 110 to 24 VAC 40VA up to 10 Electronic Valves

**060772A**  
Transformer 110 to 24 VAC 100VA up to 25 Electronic Valves

**DECK PLATES**

**061159A**  
4" Deck Plate & Hold-Down Pkg

**061160A**  
8" Deck Plate & Hold-Down Pkg

**060683A**  
24VAC to 6VDC Converter

**061259A**  
Ground Wire Kit (for hardwire models)

**061047A**  
24VAC to 6VDC Converter with Battery Backup

**061256A**  
36" Sensor Module Extension Cable

**COVER**

060577A 12" Stainless Steel Cover	060073A Screws (4/pkg) and driver bit for covers
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**TMV Repair Kits**

061137A Adjustment Wrench	063164A Check Valves (2/pkg)
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**PLEASE LEAVE this M&I Sheet with the owner, maintenance plumber, etc. as items relating to ongoing maintenance suggestions and procedures are included.**

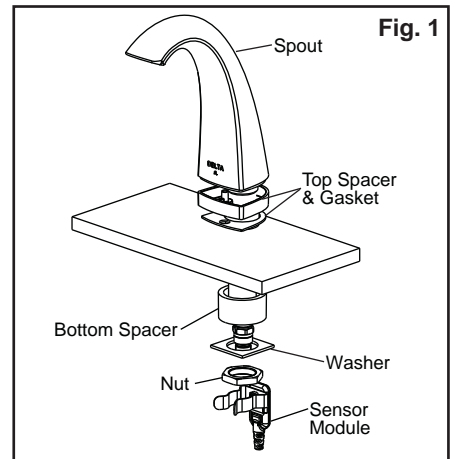
Installation should be in accordance with local plumbing and electrical codes.  
**FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 591TPxxx0 Battery Operated Surface Mount Box #0

### INSTALLATION AND SET UP INSTRUCTIONS

#### STEP 1. FAUCET INSTALLATION

Mount faucet to sink using the provided components in the following order - grey bottom spacer, washer, lock nut (Fig. 1). **NOTE: The black top spacer must be used at all times between the spout and countertop/sink, and the grey spacer must be used at all times between the washer and deck.** Ensure open side of bottom spacer faces up. The faucet and threaded shank must not touch any conductive surfaces (metal sink, screws, drainage). If cover plate is being used, it must be between the top spacer and the deck. Ensure that gasket is sitting flat on the deck and the faucet is centered on the gasket. Use the same procedure for installation of optional 4" or 8" deck plate package (061159A or 061160A). Mount the faucet to the sink using nut(s) and washer(s) provided. Do not overtighten the nut or reposition the faucet once installed, otherwise damage to the gasket may result. Cutting or trimming of the gasket is not recommended. **NOTE: If the gasket is trimmed or not installed, then use clear silicone sealant between the faucet and lavatory to prevent water from leaking beneath lavatory.**



#### STEP 2. SURFACE MOUNT BOX INSTALLATION

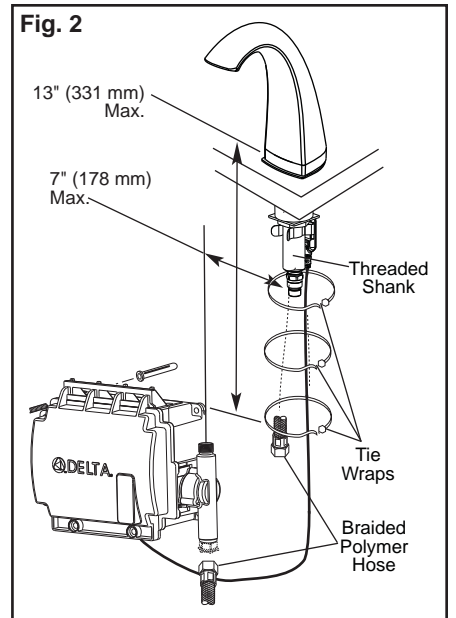
Mount surface mount box to wall under sink using the 4 supplied screws and anchors. Use 1/4" drill for wall anchors. **Be sure to install the box within the dimensions and orientation provided so the hose and sensor cable will reach connections at faucet and surface mount box.** Refer to illustration (Fig. 2).

#### STEP 3. FLUSH SYSTEM

To flush supply line, assemble the bypass adapter as shown (Fig. 3) and run water for one minute. Shut off water supply. Attach aerator. **NOTE: Do not connect supply to the solenoid inlet until the line is flushed directly out of the spout.**

#### STEP 4. CONNECT WATER SUPPLY

Disassemble the components, reassemble the ones shown here (Fig. 4) supply line and adapter to the bottom fitting on solenoid, polymer braided spout hose to the top fitting on solenoid. Use plumber tape where indicated on adapter. Turn on water supply. Must use the polymer braided hose on both the inlet and outlet of this solenoid. **DO NOT SOLDER CONNECTIONS.**



#### STEP 5. CONNECT PROXIMITY® SENSOR

Run the sensor wire out of the battery box through the box openings around the solenoid. Attach the sensor module to the faucet shank with the clip. Ensure the clip does not contact any material other than the faucet shank (Fig. 5).

#### STEP 6. PREPARE SINK AREA

*Before connecting the power - clean off counter and remove all objects from the sink.*

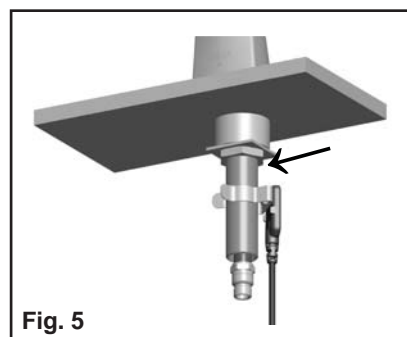
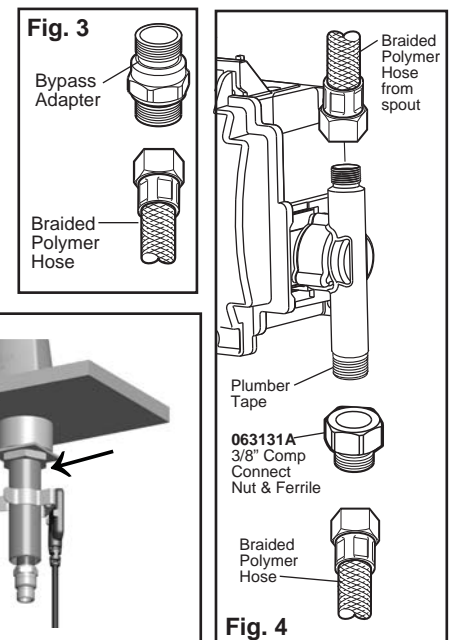
#### STEP 7a. CONNECT POWER

**IMPORTANT: ENSURE THAT WATER SUPPLY IS ON BEFORE PROCEEDING. WHEN POWER IS FIRST APPLIED TO THE DRIVER BOARD, THE INSTALLER MUST IMMEDIATELY STEP BACK AT LEAST 3 FEET FROM THE PROXIMITY SPOUT IN ORDER TO ALLOW THE UNIT TO PROPERLY CALIBRATE.**

Open the control box. Install batteries provided into the battery holder. **Do not install 9V battery.** Connect battery clip to battery pack and **step back at least 3 feet from the control box and spout in order to allow for proper calibration.** 5 quick beeps 3 times will be generated when power is first applied to the unit. Do not secure the lid until after successfully testing for operation (step 8).

#### STEP 7b. CALIBRATION

After power is applied to the driver board, it generates 5 quick beeps 3 times which prompts the installer to step away from the unit. During the calibration process, the water will turn ON for several seconds then proceed to shut off. An additional 5 beeps indicates calibration is complete and the faucet is ready to use. The cover should be secured at this time.



**Installation should be in accordance with local plumbing and electrical codes.  
FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 591TPxxx0 Battery Operated Surface Mount Box #0

### INSTALLATION AND SET UP INSTRUCTIONS

#### **STEP 8. TEST FOR OPERATION**

Test for operation. If OK, then close lid - **Use caution not to damage wires or components on electronic driver board. Route wires through notches/openings in the box.** See Fig 6. Secure lid using screws.

If faucet leaks from spout outlet:

**SHUT OFF WATER SUPPLIES.** Check proper solenoid connection. Replace solenoid if problem persists.

If faucet exhibits very low flow:

A) Remove and clean Aerator, or

B) **SHUT OFF WATER SUPPLY.** Clean or replace Screen Assembly (1).

If unit does not work properly, see Trouble Shooting Guide on pages 16 & 17.

#### **STEP 9. BASIC OPERATION AFTER CALIBRATION**

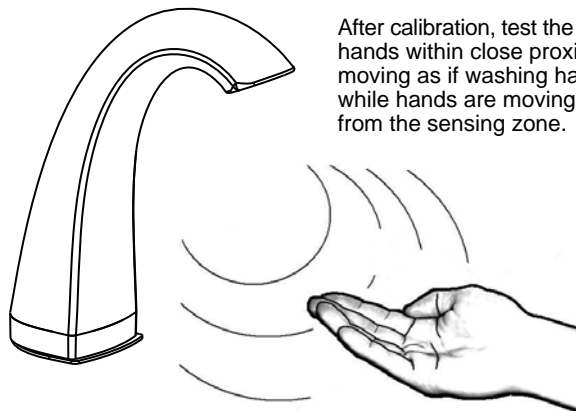
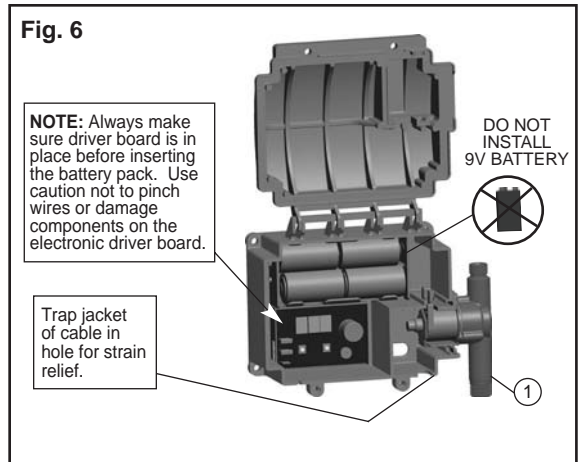
Proximity® sensing technology works by creating an electrical field around a conductor (the spout) and monitoring the change in capacitance that the conductor undergoes. The change in capacitance (the ability to store an electrical charge) is brought on by a 2nd conductor (a human body) entering the Proximity® field. As the human hand enters and leaves the vicinity of the electrical field around the spout, the solenoid is opened and closed accordingly. It is critical in the installation process that all electrical and mechanical connections be as tight and rigid as possible, ensuring a smooth signal is carried from the driver board to the spout, and back again.

Fig. 6

**NOTE:** Always make sure driver board is in place before inserting the battery pack. Use caution not to pinch wires or damage components on the electronic driver board.

**DO NOT  
INSTALL  
9V BATTERY**

Trap jacket  
of cable in  
hole for strain  
relief.



After calibration, test the function of the product by placing your hands within close proximity of the spout (ensuring hands are moving as if washing hands). The solenoid will stay open while hands are moving, then close once hands are removed from the sensing zone.

**Installation should be in accordance with local plumbing and electrical codes. FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

# 591TPxxx1TR Battery Operated Control Box #1 Trim

## INSTALLATION AND SET UP INSTRUCTIONS

### STEP 1. ROUGH IN

If recessed box is supplied, rough in as per Figure 8. The most vandal resistant installation is when the control box is as close to the bottom of the sink as feasible. For wall hung sink installation, sensor conduit rough in should be directly under the basin to minimize sensor cord exposure. Rough in drainage. Rough in water supply to 10" control box inlets and to spout connection. Finish walls.

Valve spacer is for temporary use only for flushing of system. Must be replaced with solenoid and washers (Figure 8).

### STEP 2. FAUCET INSTALLATION

Mount faucet to sink using the provided components in the following order - grey bottom spacer, washer, lock nut (Fig. 9). **NOTE: The black top spacer must be used at all times between the spout and countertop/sink, and the grey spacer must be used at all times between the washer and deck. Ensure open side of bottom spacer faces up. Washer faces away from sink and must not touch any conductive surfaces (metal sink, screws, drainage).** If cover plate is being used, it must be between the top spacer and the deck. Ensure that gasket is sitting inside groove of top spacer. Use the same procedure for installation of optional 4" or 8" deck plate package (061159A or 061160A). Mount the faucet to the sink using nut(s) and washer(s) provided. Do not overtighten the nut or reposition the faucet once installed, otherwise damage to the gasket may result. Cutting or trimming of the gasket is not recommended. **NOTE: If the gasket is trimmed or not installed, then use clear silicone sealant between the faucet and lavatory to prevent water from leaking beneath lavatory.**

### STEP 3. CONNECT WATER SUPPLY

Install sink and connect drainage to rough in. See Figure 8. Polymer braided hose (supplied) must be connected to the spout. Other connection tubes and fittings are supplied by the installer to connect to the 1/2" nominal sweat at the box outlet. Connect water supply through to spout. Assure supply lines are completely flushed and free of debris. Install aerator.

### STEP 4a. CONNECT ELECTRICAL SUPPLY, SOLENOID VALVE AND SENSOR

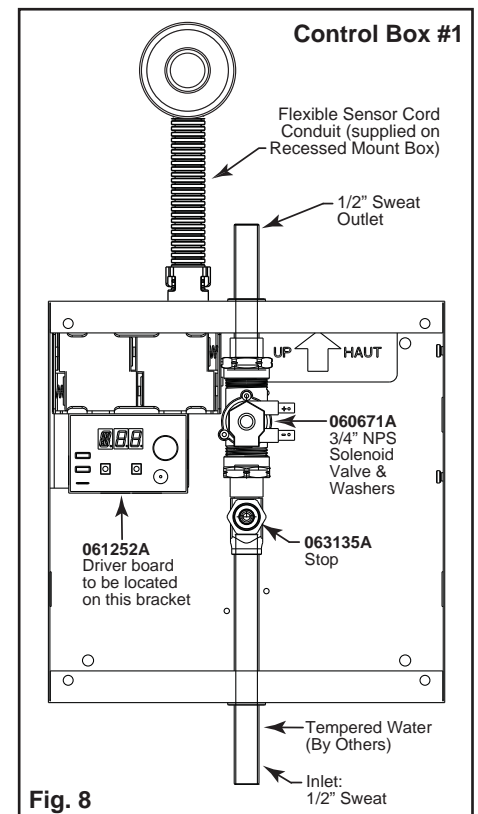
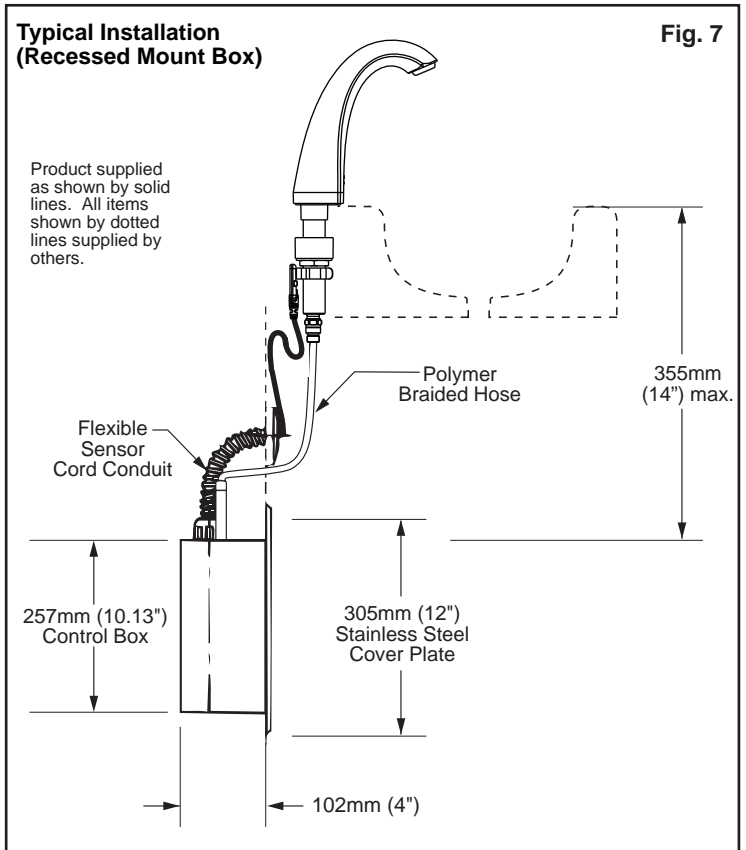
Remove valve spacer and install solenoid valve and washers with body arrow in the direction of water flow. See Fig. 10. Feed sensor wire from spout into control box and then connect to the driver board. Connect red solenoid wire from the driver board to "+" marked solenoid terminal on solenoid valve, black solenoid wire to other solenoid terminal. Attach sensor module to the faucet shank with the clip. See Fig. 11. Ensure the clip does not contact any material other than the faucet shank. Connect the sensor cable to the controller board.

**IMPORTANT: ENSURE THAT WATER SUPPLY IS ON BEFORE PROCEEDING. WHEN POWER IS FIRST APPLIED TO THE DRIVER BOARD, THE INSTALLER MUST IMMEDIATELY STEP BACK AT LEAST 3 FEET FROM THE PROXIMITY SPOUT IN ORDER TO ALLOW THE UNIT TO PROPERLY CALIBRATE.**

Open the control box. Install batteries provided into the battery holder. **Do not install 9V battery.** Connect battery clip to battery pack and **step back at least 3 feet from the control box and spout in order to allow for proper calibration.** 5 quick beeps 3 times will be generated when power is first applied to the unit. Do not secure the lid until after successfully testing for operation (step 6).

### STEP 4b. CALIBRATION

After power is applied to the driver board, it generates 5 quick beeps 3 times which prompts the installer to step away from the unit. During the calibration process, the water will turn ON for several seconds then proceed to shut off. An additional 5 beeps indicates calibration is complete and the faucet is ready to use. The cover should be secured at this time.



Installation should be in accordance with local plumbing and electrical codes.  
**FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 591TPxxx1TR Battery Operated Control Box #1 Trim

### INSTALLATION AND SET UP INSTRUCTIONS

#### STEP 5. TEST FOR OPERATION

Test for operation. If OK, then close lid - **Use caution not to damage wires or components on electronic driver board. Route wires through notches/openings in the box. See Fig 8.**

Secure lid using screws.

If faucet leaks from spout outlet:

**SHUT OFF WATER SUPPLIES.** Check proper solenoid connection. Replace solenoid if problem persists.

If faucet exhibits very low flow:

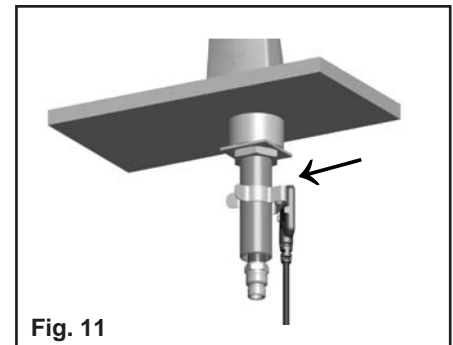
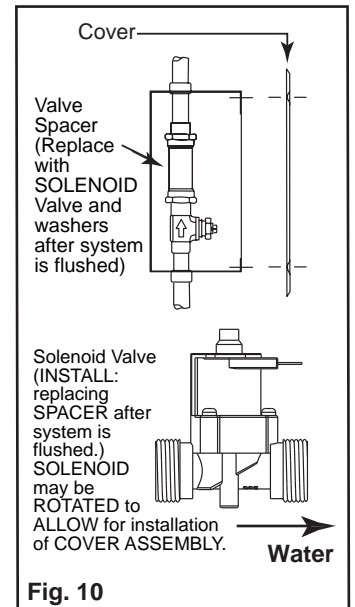
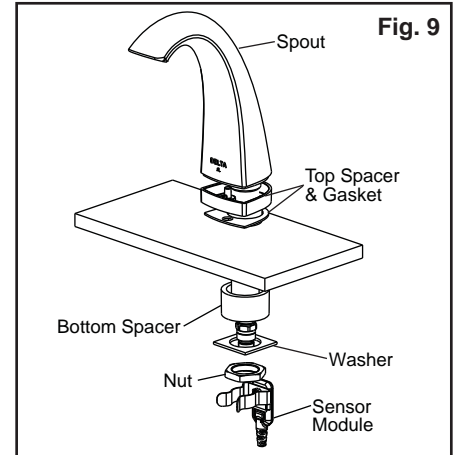
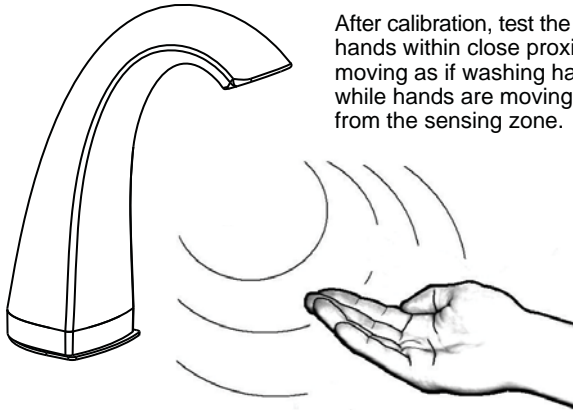
A) Remove and clean Aerator, or

B) **SHUT OFF WATER SUPPLY.** Clean or replace Screen Assembly.

If unit does not work properly, see Trouble Shooting Guide on pages 16 & 17.

#### STEP 6. BASIC OPERATION AFTER CALIBRATION

Proximity® sensing technology works by creating an electrical field around a conductor (the spout) and monitoring the change in capacitance that the conductor undergoes. The change in capacitance (the ability to store an electrical charge) is brought on by a 2nd conductor (a human body) entering the Proximity® field. As the human hand enters and leaves the vicinity of the electrical field around the spout, the solenoid is opened and closed accordingly. It is critical in the installation process that all electrical and mechanical connections be as tight and rigid as possible, ensuring a smooth signal is carried from the driver board to the spout, and back again.



**Installation should be in accordance with local plumbing and electrical codes.  
FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 591TPxxx8TR Battery Operated Control Box #8 Trim

### INSTALLATION AND SET UP INSTRUCTIONS

#### STEP 1. ROUGH IN

If recessed box is supplied, rough in as per Figure 13. The most vandal resistant installation is when the control box is as close to the bottom of the sink as feasible. For wall hung sink installation, sensor conduit rough in should be directly under the basin to minimize sensor cord exposure. Rough in drainage. Rough in water supply to 10" control box inlets and to spout connection. Finish walls.

Valve spacer is for temporary use only for flushing of system. Must be replaced with solenoid and washers (Figure 13).

#### STEP 2. FAUCET INSTALLATION

Mount faucet to sink using the provided components in the following order - grey bottom spacer, washer, lock nut (Fig. 14). **NOTE: The black top spacer must be used at all times between the spout and countertop/sink, and the grey spacer must be used at all times between the washer and deck. Ensure open side of bottom spacer faces up. Washer faces away from sink and must not touch any conductive surfaces (metal sink, screws, drainage).** If cover plate is being used, it must be between the top spacer and the deck. Ensure that gasket is sitting inside groove of top spacer. Use the same procedure for installation of optional 4" or 8" deck plate package (061159A or 061160A). Mount the faucet to the sink using nut(s) and washer(s) provided. Do not overtighten the nut or reposition the faucet once installed, otherwise damage to the gasket may result. Cutting or trimming of the gasket is not recommended. **NOTE: If the gasket is trimmed or not installed, then use clear silicone sealant between the faucet and lavatory to prevent water from leaking beneath lavatory.**

#### STEP 3. CONNECT WATER SUPPLY

Install sink and connect drainage to rough in. See Figure 13. Polymer braided hose (supplied) must be connected to the spout. Other connection tubes and fittings are supplied by the installer to connect to the 1/2" nominal sweat at the box outlet. Connect water supply through to spout. Assure supply lines are completely flushed and free of debris. Install aerator.

#### STEP 4. FLUSH SYSTEM/SET TEMPERATURE

Remove coverplate from control box. Open screwdriver stop(s) to flush installation for **one minute minimum**.

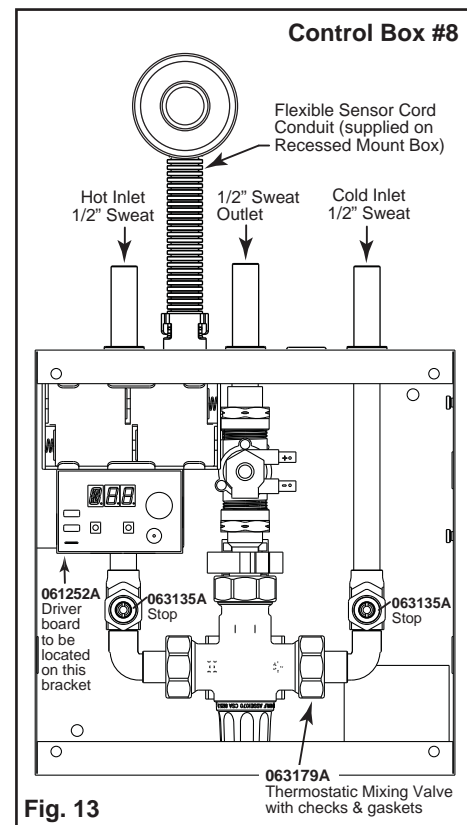
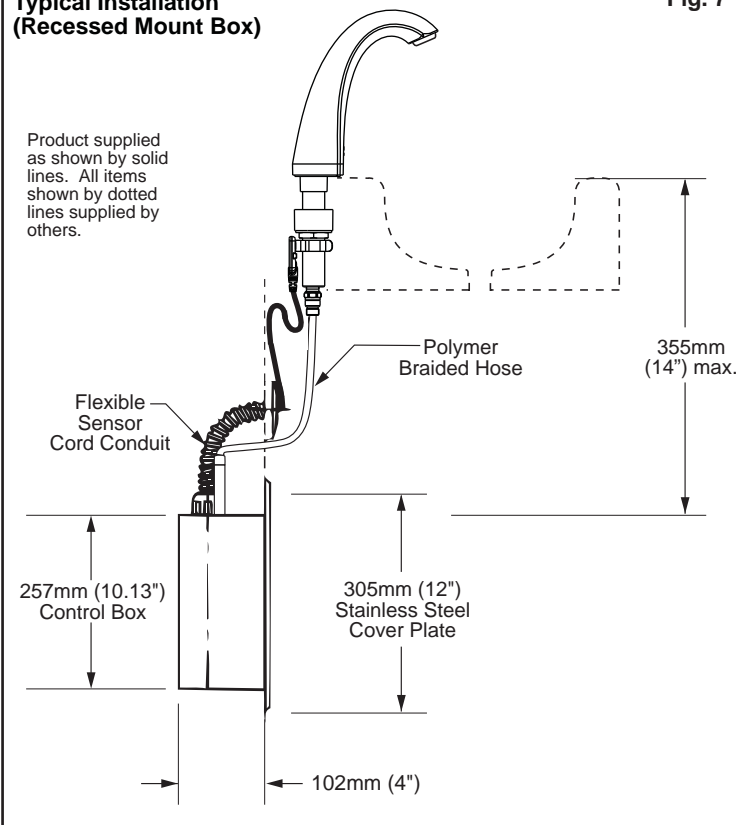
- 4A** Run water for a sufficient time so the hot and cold water supplies are as hot and cold as possible.
- 4B** Place a thermometer in a plastic container and hold in the water stream. Record the temperature reading and note position of temperature control, and lock at desired setting.
- 4C** **Thermostatic Mixing Valve** (Fig. 15) To adjust the mixed outlet temperature of the valve, remove the cap to gain access to the adjusting spindle. The spindle should be rotated towards the "C" side to reduce the temperature and towards the "H" side to increase the temperature - until the desired set point is reached.

**Periodic Inspection/Maintenance** - It is recommended that this valve is checked at least once per year to ensure its continued function. For installations with poor or unknown water quality, or other adverse supply conditions, it may be necessary to check the valve at more frequent intervals. The temperature should be checked at the same outlet as was used for commissioning in the first instance. If the temperature is more than 3°F from the commissioning in temperature, refer to the included Cash Acme Maintenance and Installation Guide.

- 4D** Close stop(s).

**Typical Installation  
(Recessed Mount Box)**

**Fig. 7**



**Fig. 13**

Installation should be in accordance with local plumbing and electrical codes.  
**FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 591TPxxx8TR Battery Operated Control Box #8 Trim

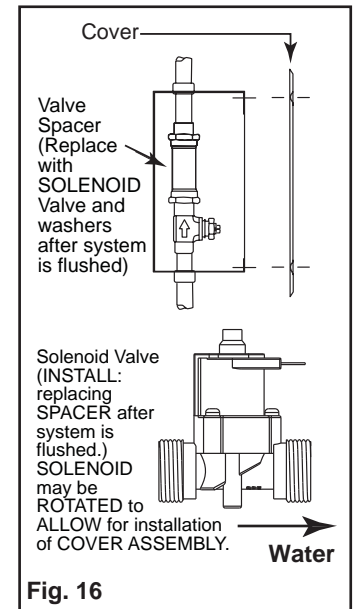
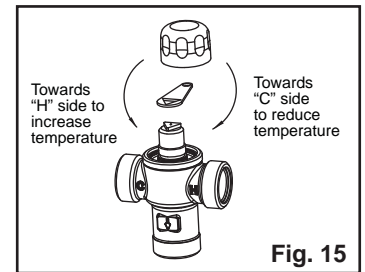
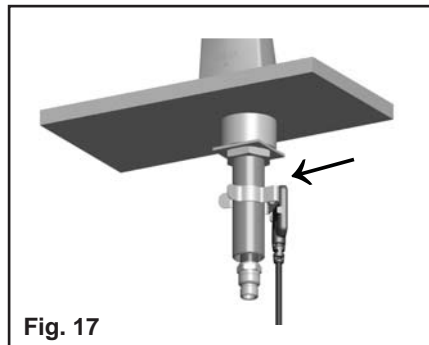
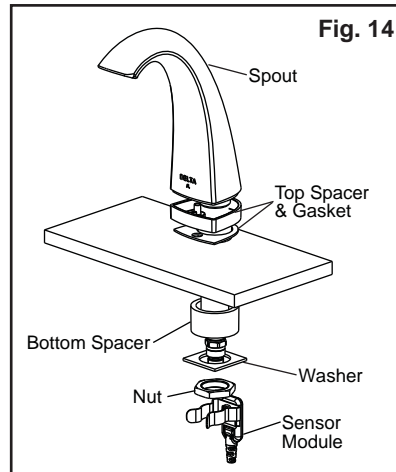
### INSTALLATION AND SET UP INSTRUCTIONS

#### STEP 5a. CONNECT ELECTRICAL SUPPLY, SOLENOID VALVE & SENSOR

Remove valve spacer and install solenoid valve and washers with body arrow in the direction of water flow. See Fig. 16. Feed sensor wire from spout into control box and then connect to the driver board. Connect red solenoid wire from the driver board to “+” marked solenoid terminal on solenoid valve, black solenoid wire to other solenoid terminal. Attach sensor module to the faucet shank with the clip. See Fig. 17. Ensure the clip does not contact any material other than the faucet shank. Connect the sensor cable to the controller board.

**IMPORTANT: ENSURE THAT WATER SUPPLY IS ON BEFORE PROCEEDING. WHEN POWER IS FIRST APPLIED TO THE DRIVER BOARD, THE INSTALLER MUST IMMEDIATELY STEP BACK AT LEAST 3 FEET FROM THE PROXIMITY SPOUT IN ORDER TO ALLOW THE UNIT TO PROPERLY CALIBRATE.**

Open the control box. Install batteries provided into the battery holder. Do not install 9V battery. Connect battery clip to battery pack and step back at least 3 feet from the control box and spout in order to allow for proper calibration. 5 quick beeps 3 times will be generated when power is first applied to the unit. Do not secure the lid until after successfully testing for operation (step 7).



#### STEP 5b. CALIBRATION

After power is applied to the driver board, it generates 5 quick beeps 3 times which prompts the installer to step away from the unit. During the calibration process, the water will turn ON for several seconds then proceed to shut off. An additional 5 beeps indicates calibration is complete and the faucet is ready to use. The cover should be secured at this time.

#### STEP 6. TEST FOR OPERATION

Test for operation. If OK, then close lid - **Use caution not to damage wires or components on electronic driver board. Route wires through notches/openings in the box. See Fig 18.** Secure lid using screws.

If faucet leaks from spout outlet:

SHUT OFF WATER SUPPLIES. Check proper solenoid connection. Replace solenoid if problem persists.

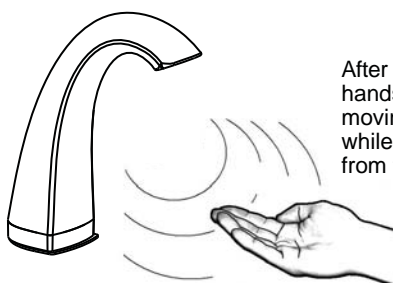
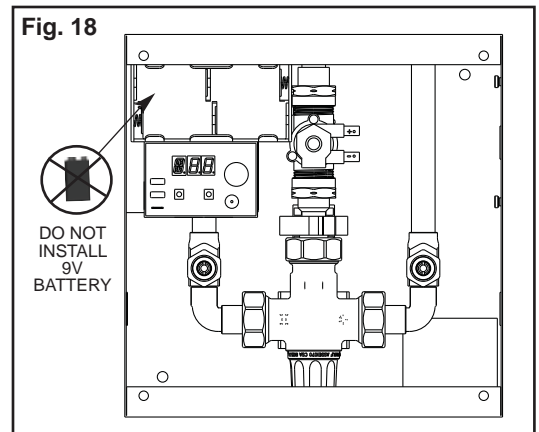
If faucet exhibits very low flow:

A) Remove and clean Aerator, or

B) SHUT OFF WATER SUPPLY. Clean or replace Screen Assembly. If unit does not work properly, see Trouble Shooting Guide on pages 16 & 17.

#### STEP 7. BASIC OPERATION AFTER CALIBRATION

Proximity® sensing technology works by creating an electrical field around a conductor (the spout) and monitoring the change in capacitance that the conductor undergoes. The change in capacitance (the ability to store an electrical charge) is brought on by a 2nd conductor (a human body) entering the Proximity® field. As the human hand enters and leaves the vicinity of the electrical field around the spout, the solenoid is opened and closed accordingly. It is critical in the installation process that all electrical and mechanical connections be as tight and rigid as possible, ensuring a smooth signal is carried from the driver board to the spout, and back again.



After calibration, test the function of the product by placing your hands within close proximity of the spout (ensuring hands are moving as if washing hands). The solenoid will stay open while hands are moving, then close once hands are removed from the sensing zone.

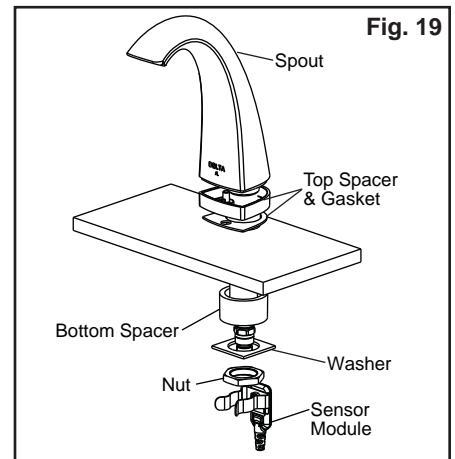
Installation should be in accordance with local plumbing and electrical codes.  
**FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 590TPxxx0 Hard Wire Operated Surface Mount Box #0

### INSTALLATION AND SET UP INSTRUCTIONS

#### STEP 1. FAUCET INSTALLATION

Mount faucet to sink using the provided components in the following order - grey bottom spacer, washer, lock nut (Fig. 19). **NOTE: The black top spacer must be used at all times between the spout and countertop/sink, and the grey spacer must be used at all times between the washer and deck.** Ensure open side of bottom spacer faces up. The faucet and shank must not touch any conductive surfaces (metal sink, screws, drainage). If cover plate is being used, it must be between the top spacer and the deck. Ensure that gasket is sitting flat on the deck and the faucet is centered on the gasket. Use the same procedure for installation of optional 4" or 8" deck plate package (061159A or 061160A). Mount the faucet to the sink using nut(s) and washer(s) provided. Do not overtighten the nut or reposition the faucet once installed, otherwise damage to the gasket may result. Cutting or trimming of the gasket is not recommended. **NOTE: If the gasket is trimmed or not installed, then use clear silicone sealant between the faucet and lavatory to prevent water from leaking beneath lavatory.**



#### STEP 2. SURFACE MOUNT BOX INSTALLATION

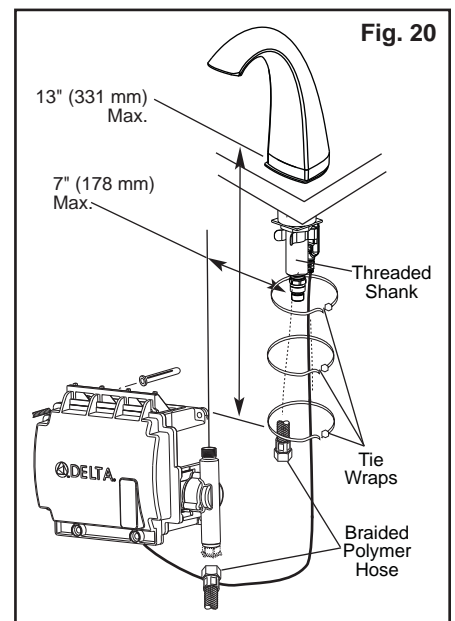
Mount surface mount box to wall under sink using the 4 supplied screws and anchors. Use 1/4" drill for wall anchors. **Be sure to install the box within the dimensions and orientation provided so the hose and sensor cable will reach connections at faucet and surface mount box.** Refer to illustration (Fig. 20).

#### STEP 3. FLUSH SYSTEM

To flush supply line, assemble the bypass adapter as shown (Fig. 21) and run water for one minute. Shut off water supply. Attach aerator. **NOTE: Do not connect supply to the solenoid inlet until the line is flushed directly out of the spout.**

#### STEP 4. CONNECT WATER SUPPLY

Disassemble the components, reassemble the ones shown here (Fig. 22) supply line and adapter to the bottom fitting on solenoid, polymer braided spout hose to the top fitting on solenoid. Use plumber tape where indicated on adapter. Turn on water supply. Must use polymer braided hose on both the inlet and outlet of this solenoid. **DO NOT SOLDER CONNECTIONS.**



#### STEP 5. CONNECT PROXIMITY® SENSOR

Run the sensor wire out of the battery box through the box openings around the solenoid. Attach the sensor module to the faucet shank with the clip. Ensure the clip does not contact any material other than the faucet shank (Fig. 23).

#### STEP 6. PREPARE SINK AREA

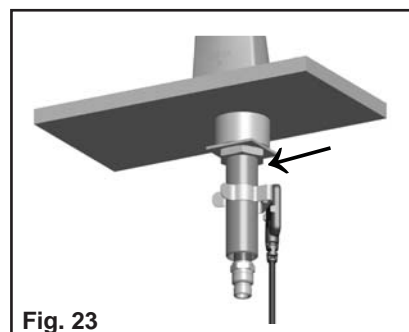
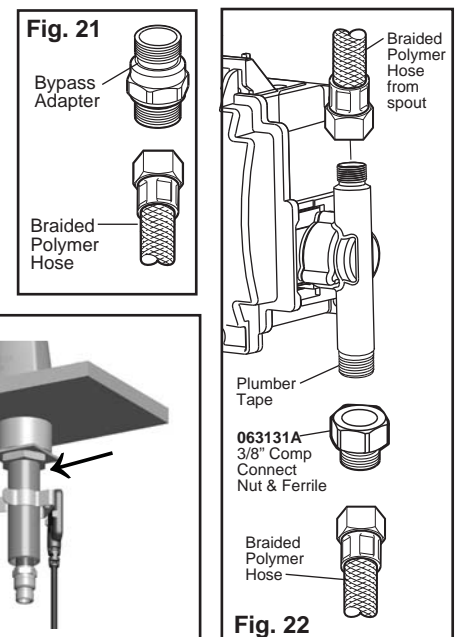
*Before connecting the power - clean off counter and remove all objects from the sink.*

#### STEP 7a. CONNECT POWER

**IMPORTANT: ENSURE THAT WATER SUPPLY IS ON BEFORE PROCEEDING. WHEN POWER IS FIRST APPLIED TO THE DRIVER BOARD, THE INSTALLER MUST IMMEDIATELY STEP BACK AT LEAST 3 FEET FROM THE PROXIMITY SPOUT IN ORDER TO ALLOW THE UNIT TO PROPERLY CALIBRATE.**

Install CSA and/or UL approved Class 2 transformer or equivalent in a convenient and appropriate location. Do NOT install the transformer inside the control box. With the power off, connect the 24VAC supply from the transformer to the pair of white supply wires coming from the hardwire converter. Refer to Fig. 24 and Fig. 25 for reference wiring diagrams. Install the grounding kit assembly (061259A) per the supplied instruction sheet for proper grounding with Conductive and Non-Conductive sinks.

Turn on power supply for the transformer. 5 quick beeps 3 times will be generated when power is first applied to the unit. At this stage, step back at least 3 feet from the controller and spout in order to allow for proper calibration. Do not secure the lid/cover until after calibration.



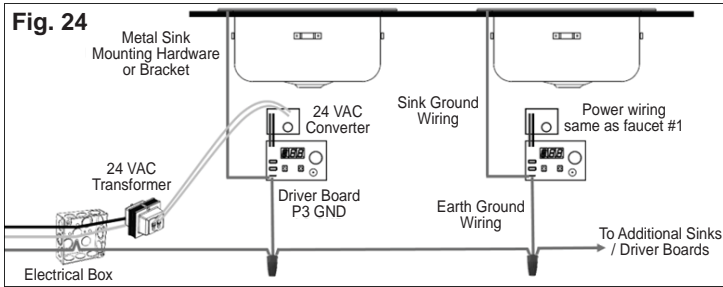


**Installation should be in accordance with local plumbing and electrical codes.  
FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

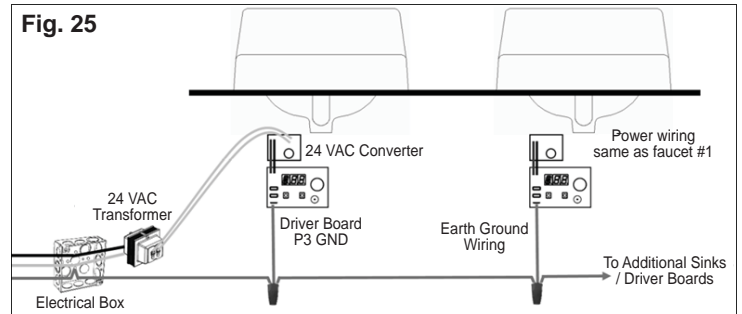
# 590TPxxx0 Hard Wire Operated Surface Mount Box #0

## INSTALLATION AND SET UP INSTRUCTIONS

### CONDUCTIVE SINKS



### NON-CONDUCTIVE SINKS



### STEP 7b. CALIBRATION

After power is applied to the driver board, it generates 5 quick beeps 3 times which prompts the installer to step away from the unit. During the calibration process, the water will turn ON for several seconds then proceed to shut off. An additional 5 beeps indicates calibration is complete and the faucet is ready to use. The cover should be secured at this time.

### STEP 8. TEST FOR OPERATION

Test for operation. If OK, then close lid - **Use caution not to damage wires or components on electronic driver board. Route wires through notches/ openings in the box. See Fig 26.** Secure lid using screws.

If faucet leaks from spout outlet:

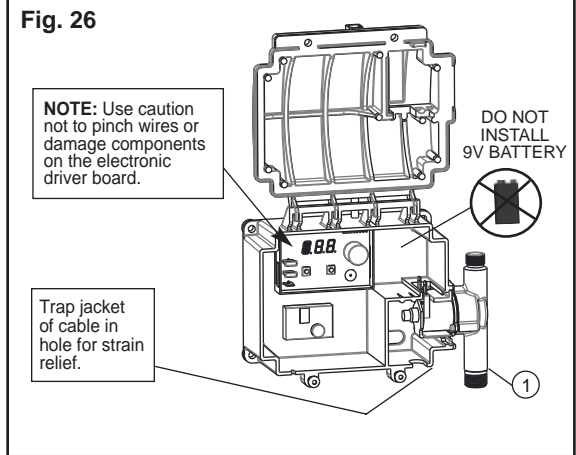
SHUT OFF WATER SUPPLIES. Check proper solenoid connection. Replace solenoid if problem persists.

If faucet exhibits very low flow:

A) Remove and clean Aerator, or

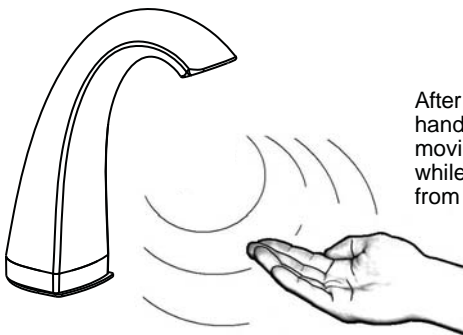
B) SHUT OFF WATER SUPPLY. Clean or replace Screen Assembly (1).

If unit does not work properly, see Trouble Shooting Guide on pages 16 & 17.



### STEP 9. BASIC OPERATION AFTER CALIBRATION

Proximity® sensing technology works by creating an electrical field around a conductor (the spout) and monitoring the change in capacitance that the conductor undergoes. The change in capacitance (the ability to store an electrical charge) is brought on by a 2nd conductor (a human body) entering the Proximity® field. As the human hand enters and leaves the vicinity of the electrical field around the spout, the solenoid is opened and closed accordingly. It is critical in the installation process that all electrical and mechanical connections be as tight and rigid as possible, ensuring a smooth signal is carried from the driver board to the spout, and back again.



After calibration, test the function of the product by placing your hands within close proximity of the spout (ensuring hands are moving as if washing hands). The solenoid will stay open while hands are moving, then close once hands are removed from the sensing zone.

**Installation should be in accordance with local plumbing and electrical codes.  
FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

# 590TPxxx1TR Hard Wire Operated Control Box #1 Trim

## INSTALLATION AND SET UP INSTRUCTIONS

### STEP 1. ROUGH IN

**Note:** Wires connecting between box(es) and from transformer must be protected from abrasion and being pulled at connections. They also may have to be routed through at a later stage of construction. Depending on installation, the cable bushings included may be replaced by **installer supplied** 1/2" conduit. Rough-in box as per Figure 27.

The transformer is to be installed in an adjacent accessible space. **(Do NOT install the transformer inside the control box.)** Cable from the transformer to the driver board/controller may be roughed in at this time depending on installation. Use cable which complies to local electrical codes for a 1 amp load. No.18 is usually sufficient.

If recessed box is supplied, rough in as per Figure 28. The most vandal resistant installation is when the control box is as close to the bottom of the sink as feasible. For wall hung sink installation, sensor conduit rough in should be directly under the basin to minimize sensor cord exposure. Rough in drainage. Rough in water supply to 10" control box inlets and to spout connection. Finish walls.

Valve spacer is for temporary use only for flushing of system. Must be replaced with solenoid and washers (Figure 28).

### STEP 2. FAUCET INSTALLATION

Mount faucet to sink using the provided components in the following order - grey bottom spacer, washer, lock nut (Fig. 29). **NOTE: The black top spacer must be used at all times between the spout and countertop/sink, and the grey spacer must be used at all times between the washer and deck. Ensure open side of bottom spacer faces up. Washer faces away from sink and must not touch any conductive surfaces (metal sink, screws, drainage).** If cover plate is being used, it must be between the top spacer and the deck. Ensure that gasket is sitting inside groove of top spacer. Use the same procedure for installation of optional 4" or 8" deck plate package (061159A or 061160A). Mount the faucet to the sink using nut(s) and washer(s) provided. Do not overtighten the nut or reposition the faucet once installed, otherwise damage to the gasket may result. Cutting or trimming of the gasket is not recommended. **NOTE: If the gasket is trimmed or not installed, then use clear silicone sealant between the faucet and lavatory to prevent water from leaking beneath lavatory.**

### STEP 3. CONNECT WATER SUPPLY

Install sink and connect drainage to rough in. See Figure 28. Polymer braided hose (supplied) must be connected to the spout. Other connection tubes and fittings are supplied by the installer to connect to the 1/2" nominal sweat at the box outlet. Connect water supply through to spout. Assure supply lines are completely flushed and free of debris. Install aerator.

### STEP 4a. CONNECT ELECTRICAL SUPPLY, SOLENOID VALVE AND SENSOR

Remove valve spacer and install solenoid valve and washers with body arrow in the direction of water flow. See Fig. 30. Feed sensor wire from spout into control box and then connect to the driver board. Connect red solenoid wire from the driver board to "+" marked solenoid terminal on solenoid valve, black solenoid wire to other solenoid terminal. Attach sensor module to the faucet shank with the clip. See Fig. 31. Ensure the clip does not contact any material other than the faucet shank. Connect the sensor cable to the controller board.

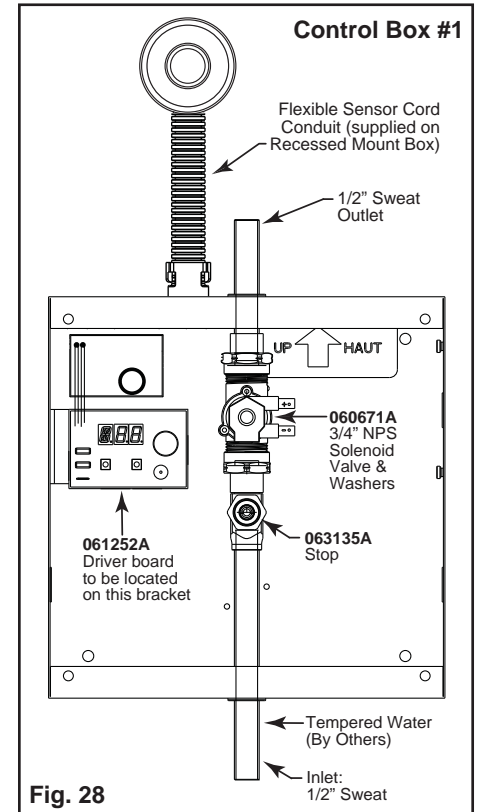
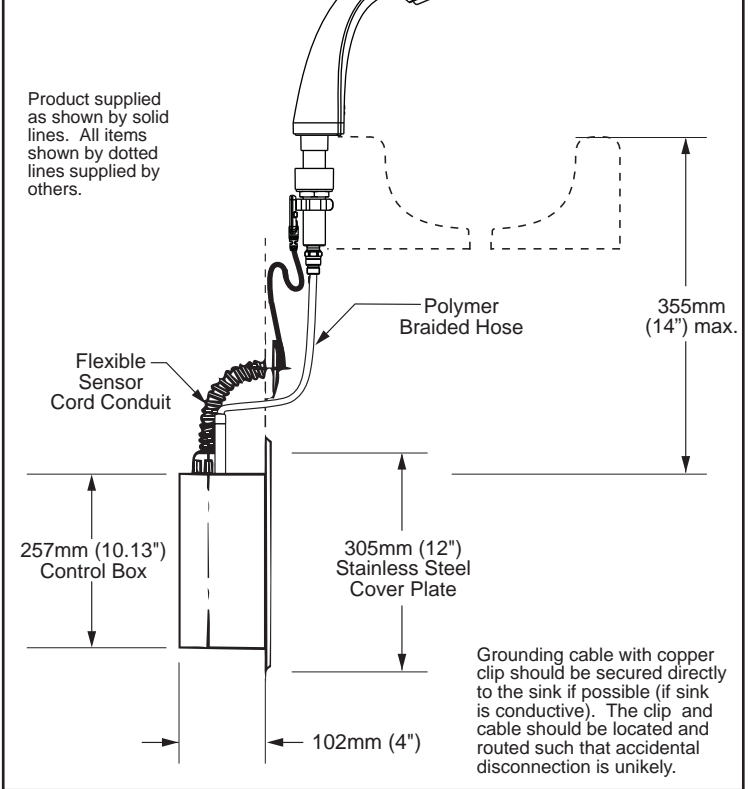
**IMPORTANT: ENSURE THAT WATER SUPPLY IS ON BEFORE PROCEEDING. WHEN POWER IS FIRST APPLIED TO THE DRIVER BOARD, THE INSTALLER MUST IMMEDIATELY STEP BACK AT LEAST 3 FEET FROM THE PROXIMITY SPOUT IN ORDER TO ALLOW THE UNIT TO PROPERLY CALIBRATE.**

Install CSA and/or UL approved Class 2 transformer or equivalent in a convenient and appropriate location. Do NOT install the transformer inside the control box. With the power off, connect the 24VAC supply from the transformer to the pair of white supply wires coming from the hardwire converter. Refer to Fig. 32 and Fig. 33 for reference wiring diagrams. Install the grounding kit assembly (061259A) per the supplied instruction sheet for proper grounding with Conductive and Non-Conductive sinks.

Turn on power supply for the transformer. 5 quick beeps 3 times will be generated when power is first applied to the unit. At this stage, step back at least 3 feet from the controller and spout in order to allow for proper calibration. Do not secure the lid/cover until after calibration.

**Typical Installation  
(Recessed Mount Box)**

**Fig. 27**



**Fig. 28**

**Installation should be in accordance with local plumbing and electrical codes. FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 590TPxxx1TR Hard Wire Operated Control Box #1 Trim

### INSTALLATION AND SET UP INSTRUCTIONS

#### STEP 4b. CALIBRATION

After power is applied to the driver board, it generates 5 quick beeps 3 times which prompts the installer to step away from the unit. During the calibration process, the water will turn ON for several seconds then proceed to shut off. An additional 5 beeps indicates calibration is complete and the faucet is ready to use. The cover should be secured at this time.

#### STEP 5. TEST FOR OPERATION

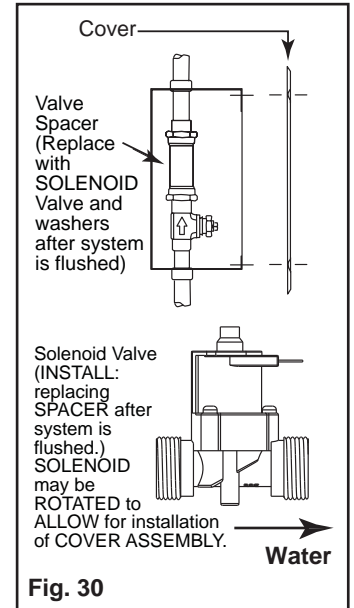
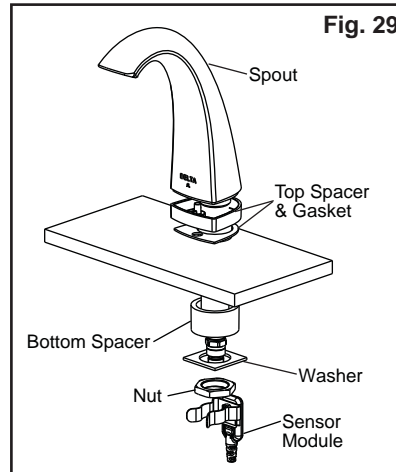
Test for operation. If OK, then close lid - **Use caution not to damage wires or components on electronic driver board. Route wires through notches/openings in the box. See Fig. 28.** Secure lid using screws.

If faucet leaks from spout outlet: **SHUT OFF WATER SUPPLIES.** Check proper solenoid connection. Replace solenoid if problem persists.

If faucet exhibits very low flow:

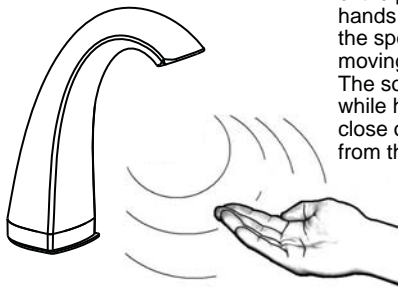
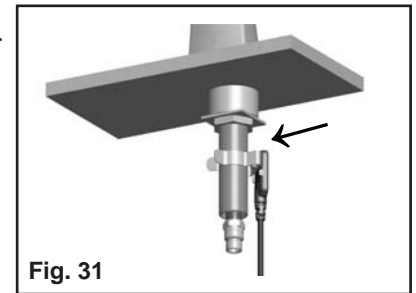
- A) Remove and clean Aerator, or
- B) SHUT OFF WATER SUPPLY. Clean or replace Screen Assembly.

If unit does not work properly, see Trouble Shooting Guide on pages 16 & 17.



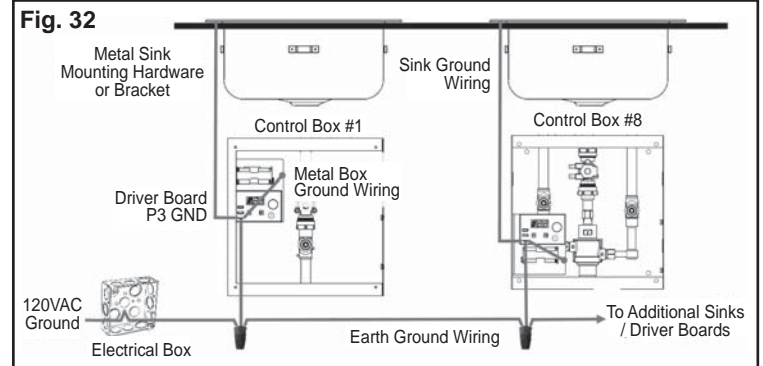
#### STEP 6. BASIC OPERATION AFTER CALIBRATION

Proximity® sensing technology works by creating an electrical field around a conductor (the spout) and monitoring the change in capacitance that the conductor undergoes. The change in capacitance (the ability to store an electrical charge) is brought on by a 2nd conductor (a human body) entering the Proximity® field. As the human hand enters and leaves the vicinity of the electrical field around the spout, the solenoid is opened and closed accordingly. It is critical in the installation process that all electrical and mechanical connections be as tight and rigid as possible, ensuring a smooth signal is carried from the driver board to the spout, and back again.

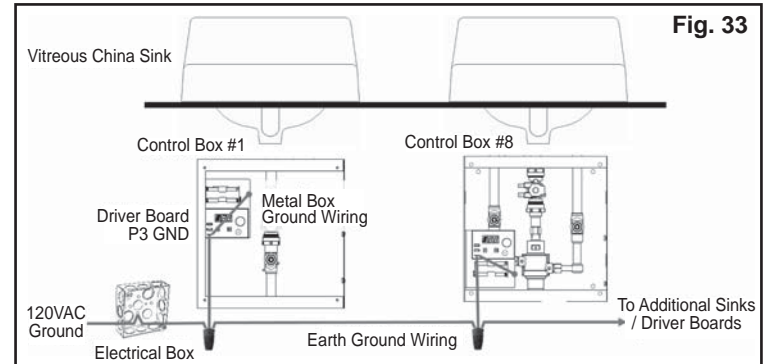


After calibration, test the function of the product by placing your hands within close proximity of the spout (ensuring hands are moving as if washing hands). The solenoid will stay open while hands are moving, then close once hands are removed from the sensing zone.

#### CONDUCTIVE SINKS



#### NON-CONDUCTIVE SINKS



Installation should be in accordance with local plumbing and electrical codes.  
**FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 590TPxxx8TR Hard Wire Operated Control Box #8 Trim

### INSTALLATION AND SET UP INSTRUCTIONS

#### STEP 1. ROUGH IN

**Note:** Wires connecting between box(es) and from transformer must be protected from abrasion and being pulled at connections. They also may have to be routed through at a later stage of construction. Depending on installation, the cable bushings included may be replaced by **installer supplied** 1/2" conduit. Rough-in box as per Figure 34.

The transformer is to be installed in an adjacent accessible space. **(Do NOT install the transformer inside the control box.)** Cable from the transformer to the driver board/controller may be roughed in at this time depending on installation. Use cable which complies to local electrical codes for a 1 amp load. No.18 is usually sufficient.

If recessed box is supplied, rough in as per Figure 35. The most vandal resistant installation is when the control box is as close to the bottom of the sink as feasible. For wall hung sink installation, sensor conduit rough in should be directly under the basin to minimize sensor cord exposure. Rough in drainage. Rough in water supply to 10" control box inlets and to spout connection. Finish walls.

Valve spacer is for temporary use only for flushing of system. Must be replaced with solenoid and washers (Figure 35).

#### STEP 2. FAUCET INSTALLATION

Mount faucet to sink using the provided components in the following order - grey bottom spacer, washer, lock nut (Fig. 36). **NOTE: The black top spacer must be used at all times between the spout and countertop/sink, and the grey spacer must be used at all times between the washer and deck. Ensure open side of bottom spacer faces up. Washer faces away from sink and must not touch any conductive surfaces (metal sink, screws, drainage).** If cover plate is being used, it must be between the top spacer and the deck. Ensure that gasket is sitting inside groove of top spacer. Use the same procedure for installation of optional 4" or 8" deck plate package (061159A or 061160A). Mount the faucet to the sink using nut(s) and washer(s) provided. Do not overtighten the nut or reposition the faucet once installed, otherwise damage to the gasket may result. Cutting or trimming of the gasket is not recommended. **NOTE: If the gasket is trimmed or not installed, then use clear silicone sealant between the faucet and lavatory to prevent water from leaking beneath lavatory.**

#### STEP 3. CONNECT WATER SUPPLY

Install sink and connect drainage to rough in. See Figure 35. Polymer braided hose (supplied) must be connected to the spout. Other connection tubes and fittings are supplied by the installer to connect to the 1/2" nominal sweat at the box outlet. Connect water supply through to spout. Assure supply lines are completely flushed and free of debris. Install aerator.

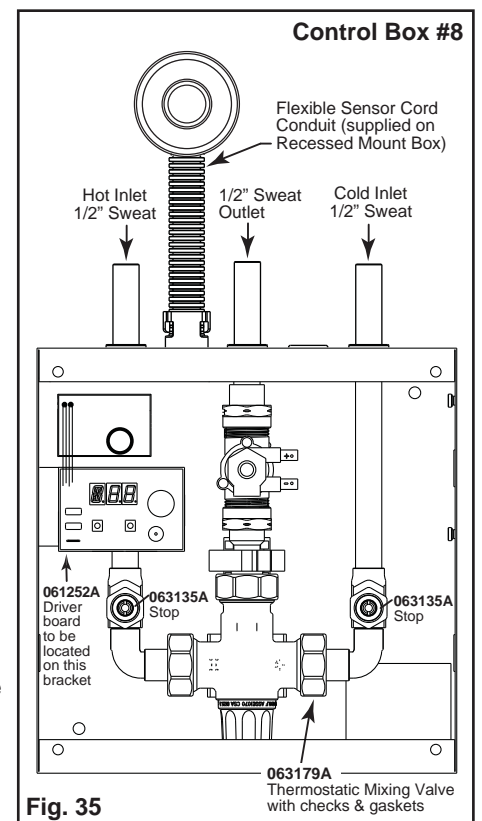
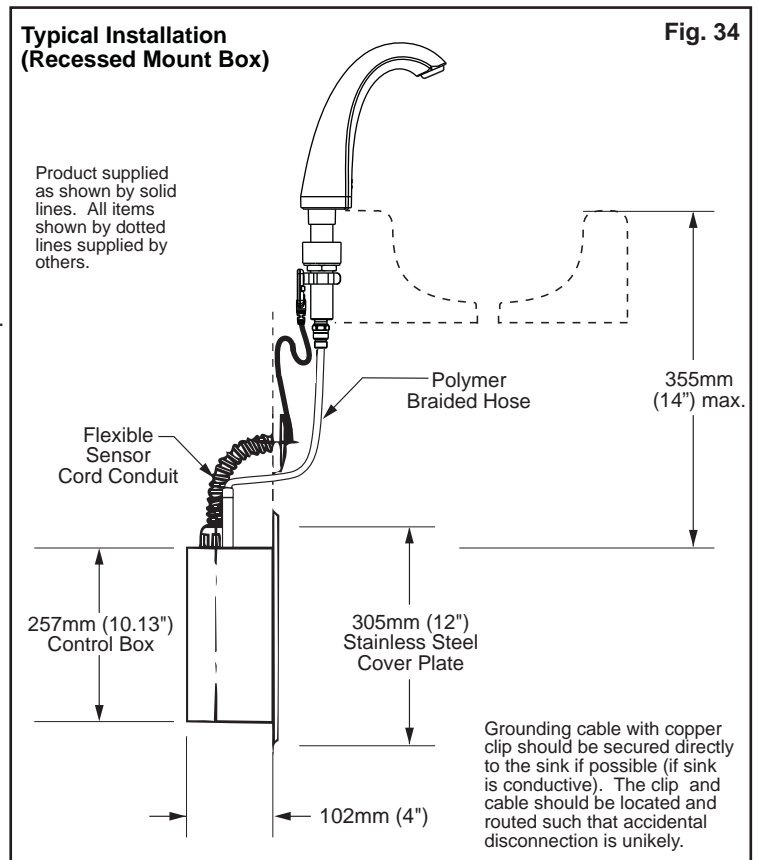
#### STEP 4. FLUSH SYSTEM/SET TEMPERATURE

Remove coverplate from control box. Open screwdriver stop(s) to flush installation for **one minute minimum**.

- 4A** Run water for a sufficient time so the hot and cold water supplies are as hot and cold as possible.
- 4B** Place a thermometer in a plastic container and hold in the water stream. Record the temperature reading and note position of temperature control, and lock at desired setting.
- 4C** **Thermostatic Mixing Valve** (Fig. 37) To adjust the mixed outlet temperature of the valve, remove the cap to gain access to the adjusting spindle. The spindle should be rotated towards the "C" side to reduce the temperature and towards the "H" side to increase the temperature - until the desired set point is reached.

**Periodic Inspection/Maintenance** - It is recommended that this valve is checked at least once per year to ensure its continued function. For installations with poor or unknown water quality, or other adverse supply conditions, it may be necessary to check the valve at more frequent intervals. The temperature should be checked at the same outlet as was used for commissioning in the first instance. If the temperature is more than 3°F from the commissioning in temperature, refer to the included Cash Acme Maintenance and Installation Guide.

- 4D** Close stop(s).



**Installation should be in accordance with local plumbing and electrical codes. FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 590TPxxx8TR Hard Wire Operated Control Box #8 Trim

### INSTALLATION AND SET UP INSTRUCTIONS

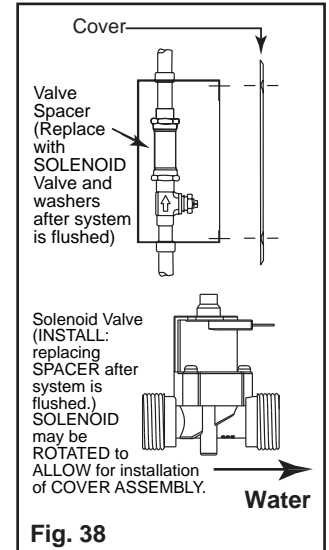
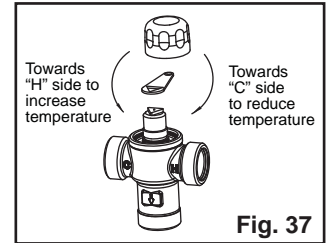
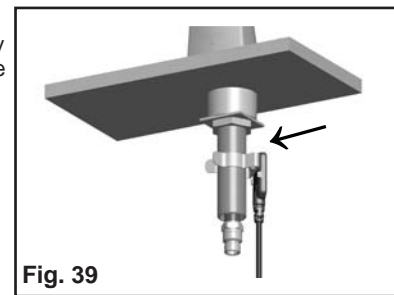
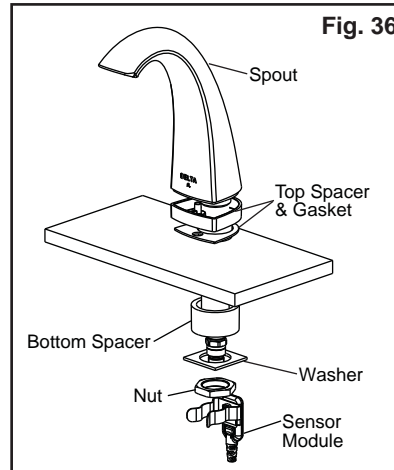
#### STEP 5a. CONNECT ELECTRICAL SUPPLY, SOLENOID VALVE AND SENSOR

Remove valve spacer and install solenoid valve and washers with body arrow in the direction of water flow. See Fig. 38. Feed sensor wire from spout into control box and then connect to the driver board. Connect red solenoid wire from the driver board to "+" marked solenoid terminal on solenoid valve, black solenoid wire to other solenoid terminal. Attach sensor module to the faucet shank with the clip. See Fig. 39. Ensure the clip does not contact any material other than the faucet shank. Connect the sensor cable to the controller board.

**IMPORTANT: ENSURE THAT WATER SUPPLY IS ON BEFORE PROCEEDING. WHEN POWER IS FIRST APPLIED TO THE DRIVER BOARD, THE INSTALLER MUST IMMEDIATELY STEP BACK AT LEAST 3 FEET FROM THE PROXIMITY SPOUT IN ORDER TO ALLOW THE UNIT TO PROPERLY CALIBRATE.**

Install CSA and/or UL approved Class 2 transformer or equivalent in a convenient and appropriate location. Do NOT install the transformer inside the control box. With the power off, connect the 24VAC supply from the transformer to the pair of white supply wires coming from the hardwire converter. Refer to Fig. 40 and Fig. 41 for reference wiring diagrams. Install the grounding kit assembly (061259A) per the supplied instruction sheet for proper grounding with Conductive and Non-Conductive sinks.

Turn on power supply for the transformer. 5 quick beeps 3 times will be generated when power is first applied to the unit. At this stage, step back at least 3 feet from the controller and spout in order to allow for proper calibration. Do not secure the lid/cover until after calibration.



#### STEP 5b. CALIBRATION

After power is applied to the driver board, it generates 5 quick beeps 3 times which prompts the installer to step away from the unit. During the calibration process, the water will turn ON for several seconds then proceed to shut off. An additional 5 beeps indicates calibration is complete and the faucet is ready to use. The cover should be secured at this time.

#### STEP 6. TEST FOR OPERATION

Test for operation. If OK, then close lid - **Use caution not to damage wires or components on electronic driver board. Route wires through notches/openings in the box. See Fig 35.**

Secure lid using screws.

If faucet leaks from spout outlet: **SHUT OFF WATER SUPPLIES.** Check proper solenoid connection.

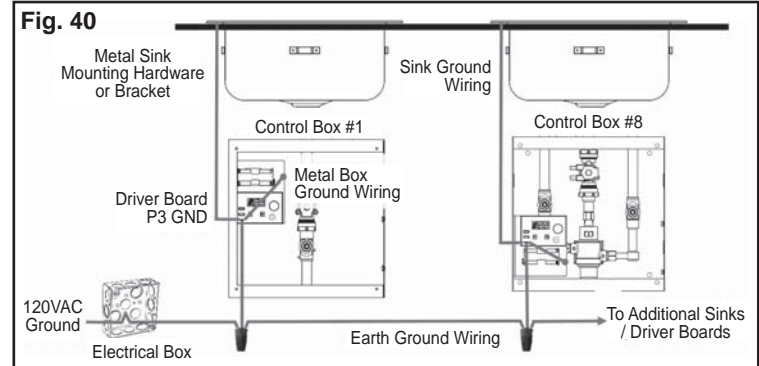
Replace solenoid if problem persists.

If faucet exhibits very low flow:

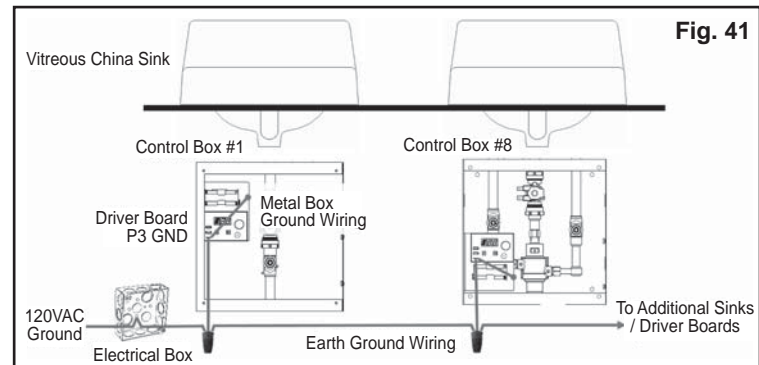
- A) Remove and clean Aerator, or
- B) **SHUT OFF WATER SUPPLY.** Clean or replace Screen Assembly.

If unit does not work properly, see Trouble Shooting Guide on pages 16 & 17.

#### CONDUCTIVE SINKS



#### NON-CONDUCTIVE SINKS



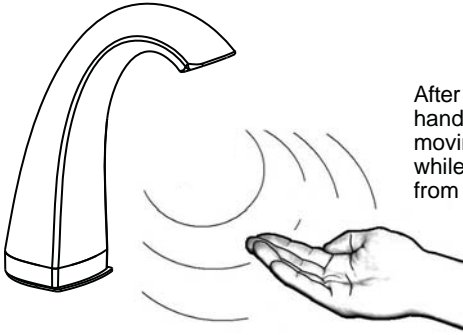
**Installation should be in accordance with local plumbing and electrical codes.  
FLUSH ALL PIPES THOROUGHLY BEFORE INSTALLATION.**

## 590TPxxx8TR Hard Wire Operated Control Box #8 Trim

### INSTALLATION AND SET UP INSTRUCTIONS

#### **STEP 7. BASIC OPERATION AFTER CALIBRATION**

Proximity® sensing technology works by creating an electrical field around a conductor (the spout) and monitoring the change in capacitance that the conductor undergoes. The change in capacitance (the ability to store an electrical charge) is brought on by a 2nd conductor (a human body) entering the Proximity® field. As the human hand enters and leaves the vicinity of the electrical field around the spout, the solenoid is opened and closed accordingly. It is critical in the installation process that all electrical and mechanical connections be as tight and rigid as possible, ensuring a smooth signal is carried from the driver board to the spout, and back again.



After calibration, test the function of the product by placing your hands within close proximity of the spout (ensuring hands are moving as if washing hands). The solenoid will stay open while hands are moving, then close once hands are removed from the sensing zone.

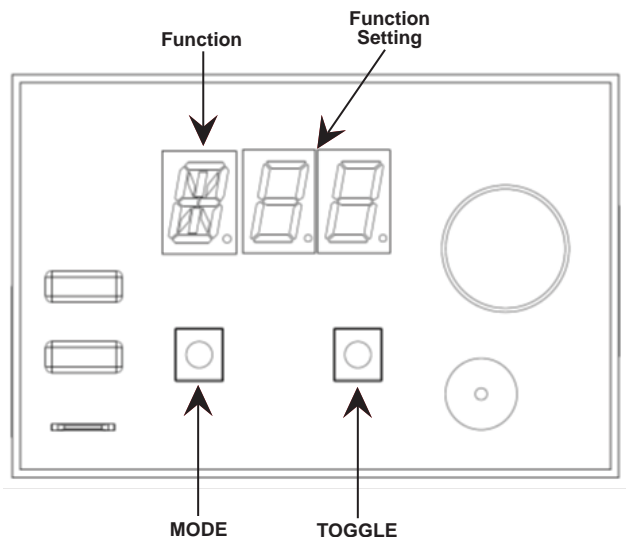
# MAKING ADJUSTMENTS

## FOR CONTROL BOXES #0, 1 & 8

The factory defaults for all settings are shown in the Quick Reference Chart below. If these are acceptable, the driver board is ready for use. If changes are required, follow the instructions to make adjustments.

### DRIVER BOARD QUICK REFERENCE CHART

Symbol	Function	Description	Factory Default Setting	Function Settings
d	Sensor Sensitivity	Higher numbers represent a more sensitive configuration. Higher sensitivity will increase the distance at which the user is detected. The sensitivity settings are on a 10 point scale (1 - 10). Please note that these setting values are relative values and do not correspond to a particular distance.	Sensitivity setting 5	1 to 10
T	Auto Timer (faucet shut-off)	Auto Timer is a safety mode in the event the sensor continually senses a target. In this case, the faucet will stop after the pre-determined time period expires.	45 seconds	5, 7, 10, 12, 15, 30, 45, 60, 75, 90 seconds 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 9.9 minutes
R	Rinse Cycle	This feature is meant to purge stagnant water from supply lines. The faucet will turn on after the set amount of hours of inactivity and run the set <i>Rinse Time (r)</i> (see below).	--	- (OFF), 6, 12, 18, 24, 30, 36, 42, 48 hours
r	Rinse Time	This feature is only active if a <i>Rinse Cycle (R)</i> time is chosen. The setting determines how long the faucet will turn on during the <i>Rinse Cycle (R)</i> .	10 seconds (once enabled)	10, 20, 30, 40, 50, 60, 90 seconds 2.0, 2.5, 3.0 minutes
b	Buzzer	For Proximity, the buzzer setting does not silence the controller and sensor status annunciations. Buzzer options are ON and -(OFF), the default setting is ON.	ON	ON, - (OFF)
M	Metering Mode	This feature changes the product into a metering faucet; it will run the full set amount of time after the user's hands are first detected. Note: <i>Auto Timer (T)</i> is disabled when the feature is turned on.	--	-- (OFF), 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 24, 30, 40, 50, 60, 90 seconds 2.0, 2.5, 3.0, 3.5, 4.0 minutes



To adjust settings, press and hold MODE (yellow pushbutton on left hand side) until the Function symbol appears. Once in Adjustment Mode, keep pressing MODE until desired Function is reached (see Quick Reference Table). To change Function Setting, press and release TOGGLE (white pushbutton on right hand side) until desired Function Setting is reached (see Quick Reference Table).

**Note:** Controller will leave Adjustment Mode after 5 seconds of inactivity.

## BATTERY STRENGTH INDICATOR

To check the battery strength:

Press and hold MODE (yellow pushbutton on left hand side). After 5 seconds the battery strength will be displayed:

- FUL - Healthy
- MID - Average
- Lo\_ - Low Average
- bAd - Replace Batteries (buzzer will annunciate and LED will blink if activated - if these features are turned on)

If you have any questions about the installation of this product or need help troubleshooting this product, please call Delta Commercial Technical Services at 1-800-387-8277 (Canada) or 1-877-509-2680 (U.S.A.).

# CARE INSTRUCTIONS

This Delta Commercial faucet is designed and engineered in accordance with the highest quality and performance standards. With proper care, it will give years of trouble free service. Care should be given to the cleaning of this product. Although the chrome finish is extremely durable, it can be DAMAGED by ACIDIC CLEANERS (i.e. cleaners designed specifically for vitreous china lavatories and water closets), HARSH ABRASIVES or POLISH. To clean, simply wipe the surface with a damp cloth and blot dry with a soft cloth.

## GROUNDING AND ISOLATION

Proximity<sup>®</sup> sensing technology works by sensing changes in the electrical field.

Nearby conductive materials that are electrically charged or not properly electrically grounded may interfere with the desired function of the product. If the controller is unable to calibrate, this is most likely due to poor isolation of the sensor, or improper grounding of nearby conductive material.

To ensure best performance, it is important that these nearby electrical effects are minimized as much as possible.

For hardwire installations, it is essential for the controller to be grounded to an electrical ground. Please note that supply or drainage plumbing may not be grounded to an electrical ground. It is not always necessary to ground battery product, but in some installations this may prove beneficial.

Cosmetically chromed drain plumbing may have non-conductive protective coatings, and may have electrical interruptions and should not be used for grounding purposes.

Conductive sinks; often stainless or cast iron are a common source of electrical interference. Such sinks should be grounded to an electrical ground. There may be protective coatings that insulate the sink, proper electrical connection should be confirmed. On stainless sinks, this may be achieved by connecting to the sink mounting hardware with the grounding strap.

Furthermore, it is essential that the sensor module and faucet are electrically isolated from the sink. Be sure to use all supplied spacers. There are spacers supplied for both the above and below deck surfaces. The supplied spacers should aid in preventing the faucet shank from contacting the sink, however care must be taken to ensure that the faucet, shank and sensor module are isolated from all nearby conductive material.

Other items such as conductive counters, sink supports, or nearby power/data lines may also create interference and should be avoided/ routed away from or where possible, electrically grounded.

## TROUBLESHOOTING GUIDE

Restart controller by disconnecting the power connector, wait 10 seconds and reattach. The controller will go through its normal startup routine.

If the faucet is not working properly, first check for error codes by doing the following:

Press and hold TOGGLE (white pushbutton on right hand side) button for 5 seconds. Once you see the "E", press TOGGLE button to cycle through and note the error codes:

- **E01/E02 - Lost /Poor Communication with Sensor**
  - Confirm sensor is connected and wire harness is not damaged.
  - Confirm connectors are clean, dry and corrosion free.
  - If extension is used, ensure both ends are connected.
  - Restart controller and retest.
- **E03 - Controller Problem**
  - Restart controller and retest. If failure continues, contact Technical Service.
- **E04 - Proximity Calibration Failure**
  - Confirm sensor module is connected to faucet shank.
  - Ensure faucet and sensor module is electrically isolated from sink and any other conductive materials.
  - Route sensor cables away from power supply wires of any type.
  - Check grounding (see section on Grounding).
  - For surface mount box #0, ensure polymer braided hose is used on both the inlet and outlet of the solenoid.
- **E05 - Solenoid**
  - Confirm solenoid is connected.
  - If possible, cross test solenoid and controller with a known functional controller and solenoid.
- **E06/E07 - Low Power**
  - On battery product, replace batteries, be sure to use the supplied battery holder or repair part.
  - On hardwired product, check supply voltage (see below).



# TROUBLESHOOTING GUIDE

<b>Step 1</b>	<p>Check to ensure faucet was installed according to the M&amp;I sheet.</p> <p>Test for operation. If unit does not operate:</p>	<p>Note: See attached M&amp;I, pages 1 to 15.</p> <p>Verify spacers are in place; black spacer on top and grey spacer on the bottom of the sink or counter.</p> <p>Check to be sure power cable is properly secured in fitting.</p> <p>Check to be sure batteries are fresh and properly installed.</p> <p>Check two wires to solenoid to be sure they are connected correctly.</p> <p>Check to be sure water supply is turned on.</p> <p>Check to ensure sensor module is connected to the controller board.</p> <p>Check to ensure sensor module is attached to spout shank.</p> <p>Check to ensure polymer braided hoses are connected to both inlet and outlet of the solenoid on surface mount box #0.</p> <p>Confirm the spout and sensor clip do not contact any conductive material, including conductive water lines, metallic sinks, structural supports or other mounting hardware.</p>		
<b>Step 2</b>	Faucet makes beeping noise.	<p><b>BATTERY POWERED Faucet beeps twice when turning off:</b> indicates batteries are low and need to be replaced (1500 cycles or 2 weeks left).</p> <p><b>Faucet beeps continuously when hands in front of spout and no water.</b> Faucet locked out because batteries are too low.</p>	<p>Replace batteries.</p> <p>Replace batteries.</p>	
		<p><b>HARDWIRE</b> Check voltage from converter and transformer. It should be approximately 6.4 volts DC coming from converter to the driver board.</p>	<p>Replace Hard Wire converter 060683A or 061047A (BB), if required.</p>	
<b>Step 3</b>	The faucet stops working. No water flow. Check the function of the solenoid.	The solenoid should “click” when activated.		
		If there is a clicking sound;	<p>This indicates that both the sensor and the solenoid are functioning.</p> <p>Ensure inlet screen on solenoid is not plugged with debris.</p> <p>Check the incoming water supply. Turned on, proper pressure and volume, etc.</p>	<p>Clean as required.</p> <p>Correct as required.</p>
		If no clicking sound;	<p>Check for a pressure lock between the mixing valve and the solenoid. Turn off the water supply and undo the connection to the inlet of the solenoid, this will eliminate any built up pressure.</p> <p><b>Then activate sensor and test fire the solenoid.</b></p>	
		<b>If after above there is no clicking sound;</b> Defective solenoid.	<p>Replace 063127A or 060671A Solenoid.</p>	
<b>Step 4</b>	If faucet does not activate, works erratically or water turns on at random.	<p>Check for electrical interference.</p> <p>Check for interference from other electrical devices within close proximity to the spout or battery box. Devices such as electrical power or data wiring, transformers, etc.</p> <p>If hardwired, confirm controller is properly grounded.</p> <p>If installed on a metal sink, ensure sink and controller are both properly grounded.</p> <p>Confirm spout inlet is supplied by the polymer braided hose.</p>	<p>Call Technical Service if any such conditions found.</p>	
	Faucet turns on and off constantly. Faucet turns on, but shuts off immediately.	<p>Ensure there is sufficient flow to the faucet (ensure inlet screen on solenoid is not plugged with debris).</p> <p>Check supply voltage.</p> <p>Check to ensure batteries are fresh and of the correct type.</p> <p>Check to ensure polymer braided hoses are connected to both inlet and outlet of the solenoid on surface mount box #0.</p> <p>Confirm batteries are secure and properly oriented in holder.</p> <p>Ensure power connector from controller is securely attached to AC/DC converter or battery holder.</p> <p>Recalibrate by disconnecting the AC/DC converter or battery for 10 seconds, then reconnecting. Allow unit to re-calibrate.</p>	<p>Clean as required.</p> <p>Install 4 “C” batteries.</p>	
<b>Step 5</b>	If after completion of all above steps, the valve still does not function correctly; Call Technical Service for further assistance at 1-800-387-8277 (Canada) or 1-877-509-2680 (U.S.A.).			

## Delta Commercial Faucet Limited Warranty

All parts of the Delta® HDF® and TECK® faucets are warranted to the original consumer purchaser to be free from defects in material, finish and workmanship for a period of five (5) years unless otherwise specifically stated in the catalogue and price book. This warranty is made to the original consumer purchaser and shall be effective from date of purchase as shown on purchaser's receipt.

Delta will, at its option, repair or replace, FREE OF CHARGE, during the warranty period, any part which proves defective in material or workmanship under normal installation, use and water and service conditions. If Delta Faucet concludes that the returned part was manufactured by Delta Faucet and is, in fact, defective, then Delta Faucet will honour the warranty stated herein. Replacement parts can be obtained from your local dealer or distributor listed in the telephone directory or by returning the part along with the purchaser's receipt to our factory, TRANSPORTATION CHARGES PREPAID, at the address listed. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY DELTA. ANY CLAIMS MADE UNDER THIS WARRANTY MUST BE MADE DURING THE FIVE YEAR PERIOD REFERRED TO ABOVE. ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. LABOUR CHARGES AND/OR DAMAGE INCURRED IN INSTALLATION, REPAIR OR REPLACEMENT AS WELL AS INCIDENTAL AND CONSEQUENTIAL, SPECIAL, INDIRECT OR PUNITIVE DAMAGES CONNECTED THEREWITH ARE EXCLUDED AND WILL NOT BE PAID BY DELTA FAUCET.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty is for commercial products only from Delta Faucet Company and Delta Faucet Canada (a division of Masco Canada Limited) and is void for any damage to this faucet due to misuse, abuse, neglect, accident, improper installation, any use in violation of instructions furnished by Delta Faucet or any use of replacement parts other than genuine Delta parts.

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## Garantie Limitée Delta Commercial

Toutes les pièces des robinets de marque Delta® HDF® et TECK® sont garanties contre tout défaut de matériel, de finition et de main-d'oeuvre pour une période de cinq (5) ans, sauf indication contraire stipulée dans le catalogue et la liste des prix. Cette garantie est offerte à l'acheteur original et entre en vigueur à compter de la date d'achat indiquée sur la preuve d'achat.

Delta procédera, à son entière discrétion, à la réparation ou au remplacement, SANS FRAIS, durant la période de garantie, de toute pièce qui présente un défaut de matériel ou de main-d'oeuvre dans des conditions d'installation, d'usure, d'eau et de service normales. Si Delta Faucet détermine que la pièce retournée a été fabriquée par Delta Faucet et qu'en effet, cette pièce défectueuse, Delta Faucet respectera alors la garantie mentionnée ci-dessous. Les pièces de rechange peuvent être obtenues chez votre marchand local ou le distributeur inscrit dans votre annuaire téléphonique, ou en retournant la pièce ainsi que la preuve d'achat à notre usine, FRAIS DE TRANSPORT PRÉPAYÉS, à l'adresse indiquée. CETTE GARANTIE EST LA SEULE GARANTIE EXPRESSE FAITE PAR DELTA.

TOUTE RÉCLAMATION FAITE EN VERTU DE CETTE GARANTIE DOIT ÊTRE PRÉSENTÉE DURANT LA PÉRIODE DE CINQ ANS MENTIONNÉE CI-DESSUS. TOUTE GARANTIE IMPLICITE, Y COMPRIS LA GARANTIE IMPLICITE DE VALEUR COMMERCIALE D'ADÉQUATION POUR UN USAGE PARTICULIER, EST LIMITÉE DANS LE TEMPS À LA DURÉE DE LA PRÉSENTE GARANTIE.

LES FRAIS DE MAIN-D'OEUVRE ET/OU LES DOMMAGES ENCOURUS DURANT L'INSTALLATION, LA RÉPARATION OU LE REMPLACEMENT AINSI QUE LES DOMMAGES ACCIDENTELS ET CONSÉCUTIFS, SPÉCIAUX, INDIRECTS OU PUNITIFS QUI SONT RELIÉS SONT EXCLUS ET NE SERONT PAS PAYÉS PAR DELTA FAUCET.

Certains états ne permettent pas la limitation de la durée de la garantie implicite, ou l'exclusion ou la limitation des dommages accidentels ou consécutifs, et par conséquent, les limitations ou les exclusions stipulées ci-dessus peuvent ne pas s'appliquer dans votre cas. Cette garantie vous accorde certains droits reconnus par la loi et vous pouvez aussi avoir d'autres droits qui varient d'un état à l'autre.

Cette garantie s'applique seulement aux produits commerciaux de Delta Faucet Company et Delta Faucet Canada (une filiale de Masco Canada Limited) et est nulle de plein droit pour tout dommage causé à ce robinet en raison d'une mauvaise utilisation, d'abus, de négligence, d'accident, de mauvaise installation, pour tout usage en contravention des directives fournies par Delta Faucet ou pour tout usage de pièces de rechange autres que des pièces originales Delta.

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## Garantía Limitada de las Llaves de Agua Comerciales Delta

Todas las piezas de las llaves de agua (grifos) Delta® HDF®, TECK® están garantizadas al comprador consumidor original de estar libres de defectos de material, acabado y fabricación por un periodo de cinco (5) años a menos que sea establecido específicamente de otra manera en el catálogo o libro de precios. Esta garantía se le otorga al comprador consumidor original y será efectiva desde la fecha de compra indicada en el recibo del comprador.

Delta, a su opción, reparará o reemplazará, GRATUITAMENTE, durante el periodo de garantía, cualquier pieza que resulte defectuosa en material o fabricación bajo instalación, uso, agua y condiciones de servicio normales. Si Delta Faucet concluye que la pieza devuelta fue fabricada por Delta Faucet y es, de hecho, defectuosa, entonces Delta Faucet honrará la garantía establecida en este documento.

Las piezas de reemplazo se pueden obtener de su tienda o distribuidor local listado en la guía telefónica o devolviendo la pieza junto con el recibo de compra a nuestra fábrica, CON LOS GASTOS DE ENVÍO PRE-PAGADOS, a la dirección indicada. ESTA GARANTÍA ES LA ÚNICA GARANTÍA EXPRESA HECHA POR DELTA. CUALQUIER RECLAMO HECHO BAJO ESTA GARANTÍA DEBE SER HECHO DURANTE EL PERÍODO DE CINCO AÑOS ARRIBA MENCIONADO. CUALQUIER GARANTÍA IMPLÍCITA, INCLUYENDO LA GARANTÍA IMPLÍCITA DE COMERCIABILIDAD DE EMPLEO PARA UN PROPÓSITO PARTICULAR, TIENE UNA DURACIÓN LIMITADA A LA DURACIÓN DE ESTA GARANTÍA. LOS CARGOS DE MANO DE OBRA Y/O DAÑO INCURRIDO DURANTE LA INSTALACIÓN, REPARACIÓN O REEMPLAZO, COMO TAMBIÉN DAÑOS INCIDENTALES O RESULTANTES, ESPECIALES, INDIRECTOS O PUNITIVOS RELACIONADOS CON LO MENCIONADO, QUEDAN EXCLUIDOS Y NO SERÁN CUBIERTOS POR DELTA FAUCET.

Algunos estados no permiten limitaciones de la duración de una garantía implícita, o la exclusión o limitación de daños incidentales o consecuentes, de manera que las limitaciones o exclusiones arriba mencionadas puedan no aplicarse en su caso. Esta garantía le otorga derechos legales específicos, y usted también puede tener otros derechos que varían de estado a estado.

Esta garantía es solo para productos comerciales de Delta Faucet Company y Delta Faucet Canada (una división de Masco Canada Limited), y queda anulada por cualquier daño ocasionado a esta llave de agua resultante del mal uso, abuso, descuido, accidente, instalación incorrecta, cualquier uso en violación de las instrucciones proporcionadas por Delta Faucet o el uso de cualquier parte de repuesto que no sea una parte genuina de Delta.

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Delta Faucet Canada, a division of Masco Canada Limited  
350 South Edgeware Road, St. Thomas, Ontario, N5P 4L1  
1-800-567-3300 (English) 1-800-265-9245 (French)

Delta Faucet Company  
Box 40980, 55 East 111th St., Indianapolis, IN, U.S.A. 46280  
(317) 848-1812

For further technical assistance, call Delta Commercial Technical Service at 1-800-387-8277 (Canada) or 1-877-509-2680 (U.S.A.).

Pour obtenir de l'assistance technique, appelez le Service Technique de Delta Commercial au 1-800-387-8277 (Canada) ou 1-877-509-2680 (U.S.A.).

Por la asistencia técnica adicional, llame al servicio técnico de Delta Comercial al 1-800-387-8277 (Canada) o 1-877-509-2680 (U.S.A.).