ADU-42CF

Portable Scrub Sink

NSN: 6530-01-572-6775

OPERATION & SERVICE MANUAL

Aseptico®
TABLE OF CONTENTS

Safety Precautions ........................................................................................................... 2
Introduction .......................................................................................................................... 3
   Purpose .............................................................................................................................. 3
   Performance Characteristics ............................................................................................ 3
   Items Furnished ................................................................................................................ 3
Preparation For Installation ............................................................................................... 4
   Component Locations ....................................................................................................... 4
   Assembly ............................................................................................................................ 5
   Water Source Information ............................................................................................... 6
Principles Of Operation ...................................................................................................... 6
   Water Delivery System .................................................................................................... 6
   Heating System ................................................................................................................ 7
Operating Instructions ......................................................................................................... 7
   Start Up Procedure .......................................................................................................... 7
   Soap Dispenser ............................................................................................................... 7
   Waste Water Management ............................................................................................. 7
   Shutdown Procedure ....................................................................................................... 7
   Daily Cleaning ................................................................................................................. 8
   Daily Functional Checklist ............................................................................................. 8
Cleaning And Lubrication ..................................................................................................... 9
Performance Verification .................................................................................................... 9
Troubleshooting Chart ....................................................................................................... 10
Disassembly, Repair, Replacement .................................................................................... 11
   Circuit Breakers ............................................................................................................... 11
   Spout Guide ..................................................................................................................... 11
   Chassis ............................................................................................................................... 11
   Heating Element ............................................................................................................. 11
   Level Sensors .................................................................................................................. 12
   Intake Pumps ................................................................................................................... 12
   Electronics Board ......................................................................................................... 12
   Solenoid Valve ............................................................................................................... 13
   Spout Guide Seals .......................................................................................................... 13
Preparation For Shipment & Storage ................................................................................. 13
Table of Illustrations
   Figure A - Case Contents ................................................................................................. 4
   Figure B - Legs Pouch ...................................................................................................... 4
   Figure C - Electronics Pouch .......................................................................................... 4
   Figure D - Soap Dispenser Pouch .................................................................................. 4
   Figure E - Plumbing Pouch ............................................................................................. 4
   Figure F - Leg Supports ................................................................................................ 5
   Figure G - Spout Positions .............................................................................................. 5
   Figure H - Connections .................................................................................................. 5
   Figure I - Spout Connection ........................................................................................... 5
   Figure J - Soap Dispenser ............................................................................................. 6
   Figure K - Regulator Assembly ..................................................................................... 6
   Figure L - Circuit Breakers .............................................................................................. 11
   Figure M - Spout Guide Removal .................................................................................. 11
   Figure N - Ground .......................................................................................................... 11
   Figure O - Heating Element ........................................................................................... 11
   Figure P - Level Sensors ............................................................................................... 12
   Figure Q - Intake Pumps ............................................................................................... 12
   Figure R - Electronics Board ......................................................................................... 12
   Figure S - Wiring Schematic .......................................................................................... 14
   Figure T - Plumbing Schematic ....................................................................................... 15
Schematic Drawing Set ...................................................................................................... See PN 421207

SAFETY PRECAUTIONS:

⚠️ Warning - Improper application, adjustment or servicing can result in serious injury. Always disconnect power source before servicing.

⚠️ Warning - Do not lean on the unit. Sink structure is not designed to support human weight.

⚠️ Warning - Operating this equipment in a manner not specified in this manual may impair protection features and reduce safety.

⚠️ Caution - Prevent from freezing. Purge system before storage to prevent damage to lines or pumps.

⚠️ Caution - Operate the sink in its upright position only. Tilting the sink at an extreme angle will actuate the automatic shutoff level sensor, which will turn off the heating element.
Introduction

Purpose
The ADU-42CF Portable Scrub Sink provides a practical water source for mobile medical and dental operations. Both warm and cold water are available for washing and instrument cleansing as part of the process of disinfecting medical devices. Hands free operation makes surgical scrubs simple. The rigid stainless steel basin and instrument basket are durable and easy to disinfect. And the accessory tray allows sink-side consolidation of all instruments. Light weight and compact size make the ADU-42CF easy to set-up and transport. To receive the best service and longest life from your Aseptico product, follow the instructions detailed in this manual.

Performance characteristics
• Sink Wt: 50 lbs. (22.7 kg)
• Accessories (incl basket) Wt: 19 lbs. (8.6 kg)
• Shipping Case Wt: 35 lbs. (15.9 kg)
• Total Shipping Wt: 104 lbs. (47.2 kg)
• Size (external): 25.3 x 22.4 x 12.5 in. (64.3 x 56.9 x 31.8 cm)
• Sink flow rate: High - 0.95±0.2 gpm (3.6±0.75 lpm)
  Low - 0.64±0.2 gpm (2.4±0.75 lpm)
• Max. pump discharge head: 8.3 ft (2.5 meters)
• Pump self priming limit: 48 in. (1.2 meters)
• Tank capacity: 1.45 Gal. (5.5 Liter)
• Tank Fill Time: Approximately 1-2 minutes (reference only).
• Heating capacity: 1400 Watts
• Tank Heating Time: Approximately 8 minutes from room temperature (reference only).
• Peak water temp.: 106° F, ±7°F (41°C, ±4°C)
• Cold water foot pump flow rate: 0.66 gpm (2.5 lpm) typical (reference only).
• Sink Basin Size: 21.3 x 15.4 x 7.4 in. (54.1 x 39.1 x 18.8 cm)
• Instrument Basket Size: 20.75 x 12.75 x 6 in. (52.7 x 32.4 x 15.2 cm)

Items furnished
• Sink unit, surgical
• Instrument Basket
• Aluminum legs (4).
• Intake and waste hoses.
• Cold water, manual pump.
• ON/OFF foot switch.
• 115V and 230V power cords.
• Instrument tray (6 1/2 x 10 in.).
• Grounding lug.
• Alternate source regulator.
• 2 copies Operations/Service Manual.
• 2 copies Schematic Drawing Set.
• Roll Towel Holder
• Hands-Free Soap Dispenser
• GFCI - Ground Fault Circuit Interrupter

Items not furnished
• Jerry cans or alternate water supply.
• Waste water Jerry can.

Storage and handling precautions
• Avoid freezing. To protect internal components, purge the sink’s tank and lines prior to unattended periods in sub freezing conditions.

Environmental conditions
• Operating Temperature: 1° to 45° C (34° to 113° F)
• Transport/Storage Temperature: 1° to 60° C (34° to 140° F)
• Relative Humidity: 5 to 95% non-condensing
• Altitude: 0 to 3048 meters (0 to 10,000 feet)
• Input Voltage Requirements:
  115/230 VAC, 50/60Hz, single phase 12A
• Pollution Degree 2
Preparations for use and installation instructions

After removal from its original packaging, the ADU-42CF will include the following items:

**Case Contents: Fig A**
- 1 Sink assembly (1)
- 2 MIL-Spec carry case (1)
- 3 Accessory pouches (3)
- 4 Soap Dispenser pouch (1)
- 5 Legs pouch (1)
- 6 Instrument Basket (1)
- 7 Operation & Service Manuals (2)
  (Not Shown)

**Legs Pouch: Fig B**
- 1 Legs (4) & Leg Supports (2)
- 2 Legs pouch

**Electronics Pouch: Fig C**
- 1 115V power cord
- 2 230V power cord
- 3 Foot switch
- 4 Instrument tray

**AA-42SD Soap Dispenser Pouch: Fig D**
- 1 Mounting Bracket Assembly
- 2 Foot Pedal & Hose Assembly
- 3 Dispenser Bottle
- 4 Paper Towel Holder

**Plumbing Pouch: Fig E**
- 1 Intake hose assembly
- 2 Waste hose assembly
- 3 Cold water pump assembly
- 4 Alternate source regulator assembly
Assembly
1. After removing the ADU-42CF Portable Sink from its original packaging, unfasten all perimeter latches and open the lid. Locate the accessory pouches and lift the sink from the carry case. *Refer to Figure A*

2. Leg-Supports: *Refer to Figure F*
   a) Remove the four collapsible legs from the legs pouch and unfold. Make sure the locking dowel engages completely. Insert the legs into the guide tubes on the underside of the sink chassis and twist to engage the lock-pin and secure.
   b) Unfold the leg support sections and join together to make two complete supports.
   c) Insert right front sink leg into white plastic knuckle on end of support. Insert right rear sink leg into other end of support. Repeat on left side of sink with second support.

3. Raise the sink spout to the fully extended position and secure locking cap over ball assembly to prevent spout from pivoting downward. *Refer to Figure G*

4. Remove the contents of the plumbing pouch. Attach the intake hose assembly to the quick connect, labeled “WATER” on the underside of the sink *(Refer to Figure H)*. Immerse the hose weight in the source jerry can (not provided) to the preset distance and secure the line using the attached push-on cap.

5. Attach the waste hose to the Drain connection on the underside of the sink. Place the opposite end in a waste water jerry can (not provided). Secure the line using the push on cap.

6. If desired, attach the components of the cold water pump assembly *(Refer to Figure E)* to dispense cold water.
   a) Unpack the manual foot pump and tubing assembly.
   b) Place the foot pump on a level section of ground.
   c) Attach the hose adapter to the sink spigot *(Refer to Figure I)*. Place the opposite end in a cold water jerry can (not provided). Secure the line using the push on cap. Prime the lines by depressing the foot pump several times, until water flows into the sink. *Refer to Figure E*

7. Remove the contents of the electronics pouch. Attach the electric ON/OFF foot switch to the foot switch connector, labeled “FOOT SWITCH”, on the underside of the sink *(Refer to Figure H)*.

8. If desired, unclip power input plug and cord (includes the Ground Fault Circuit Interrupter - GFCI) from sink bottom. Select the appropriate power cord for the power source. Connect the power cord to the input plug/cord and connect the other end to the power source. Press the reset button on the GFCI. The sink will operate on either a 115V or a 230V power supply. The green L.E.D. by the spout will light, indicating power.
   NOTE: The Ground Fault Circuit Interrupter will trip if power is removed from the sink. This is its normal operation. When restoring power to the sink, the GFCI must be reset after plugging in the mains power cord.
9. If desired, attach the paper towel holder, instrument tray and/or soap dispenser to sides of sink:
   a) Instrument Tray: Secure the tray with the thumbscrews (Figure J).
   b) Soap Dispenser (Figure J):
      • Position the mounting bracket against the lip of the basin as shown. Secure the bracket with the thumbscrew.
      • Fill plastic dispenser bottle with medical-grade cleansing agent/soap, to within 1/2-inch from top. Guide the mouth of the plastic bottle over the lower end of the soap spout tube and carefully screw bottle upwards into the cap.
      • Attach opposite end of foot pedal air-supply hose to the hose fitting located on the underside of the bottle cap.
      • Slide bottle & cap assembly onto receiver plate located on mounting bracket.
   c) Paper Towel Holder: Secure towel holder to other side of sink, opposite the Instrument Tray and Soap Dispenser.

10. The ADU-42CF is constructed with full electrical protection, including a Ground Fault Circuit Interrupter (GFCI). This equipment is intended for use with grounded power input. Provisions have also been made to attach an external ground rod (not provided). Connection to the ground rod may be made by securing a ground strap with a suitably sized lug to the grounding terminal on the underside of the chassis with the wing nut provided and attaching the other end of the ground strap to the grounding rod.

   NOTE: Do not position the sink or place other equipment near the sink in such a way as to impede access to the power outlet and cord.

**Water Source Information**

The ADU-42CF is designed to operate from jerry cans and from a variety of alternate water sources. If the ADU-42CF is to be used with an alternate water supply, the source will determine the required intake configuration. For operation from either a jerry can or a bladder water supply having a pressure between -2 psi and 10 psi (a supply height ranging from 4 ft. below to 23 ft. above the sink basin) appropriate flow rates can be generated by the sink’s internal pump. Connection to this type of source can be made using the existing intake tube. For connection to an established water source with an operating pressure above 5 psi, the regulator assembly is required (Refer to Figure K). Attachment is performed by disconnecting the intake hose and replacing it with the regulator assembly. A line from the water supply having male garden hose threads can then be attached to the Y-connector on the regulator assembly. **Note:** The manual foot pump should be used in conjunction with a jerry can for cold water.

**Principles Of Operation**

**Water Delivery System**

The water delivery system consists of two main pumps, a high/low flow switch, the solenoid valve, the cold water foot pump and the alternate source regulator assembly. When the ON/OFF foot switch is depressed, the internal electric pumps move water through the tank where it is warmed. The solenoid valve serves as the flow control mechanism when the sink is operated from a pressurized water source. The solenoid valve is normally closed and is actuated by depressing the foot switch. The cold water foot pump manually delivers water from the source to the basin without warming. If required, the manual pump may be used to partially prime the intake line. To use a pressurized water supply, the regulator assembly is connected between the sink and the water source, with the source attached to the Y-connector on the regulator assembly. The regulator will reduce the water’s flow to match the sink’s heating capacity and will dampen the effects of system pressure fluctuation. The high/low flow switch, located on the top of the sink basin, switches the output of water from the two pumps between maximum and minimum flow.
Heating System
The Heating System is composed of the tank, the extendable spout, the tank level sensor, the tilt shutoff sensor, the control circuitry and the heating element. The tank is the reservoir for the water to be heated. The tank level switch, located at the top of the tank, activates the heating element. To allow the level switch to actuate and begin the water warming process, the sink must be standing in its intended upright position. Tilting the sink at an extreme angle will actuate the automatic shutoff sensor, which prevents damage to the sink's heating element. The orange L.E.D. by the spout will light to indicate that the tank is full and the warming processes is active. The control circuitry will regulate the heating process to a water temperature of 106 deg. Fahrenheit, ±7°F (41 deg. Centigrade, ±4°C).

Operating instructions
Start-up procedure
Once the Set-Up is complete, prime the system by depressing the foot switch. Set the Flow Switch, located on top of sink basin to the desired High or Low flow. Allow approximately 1-2 minutes for the internal tank to fill. Release the foot switch when water begins to flow from the spout. The orange L.E.D. by the spout will light, indicating that the heating element is active. The orange L.E.D. will go out when the tank water is warmed. If desired, prime the cold water line by depressing the foot pump several times until water flows into the sink.

To operate the sink, depress the ON/OFF foot switch for warm water or the foot pump for cold water. Water will automatically be warmed as it flows through the internal water tank. The outlet temperature will vary with consumption and source temperature. A full tank of room temperature water will take approximately 8 minutes to warm to the shut off temperature of 106 deg. Fahrenheit (41 deg. Centigrade).

Soap Dispenser
Position the soap dispenser foot pedal at a convenient location directly underneath sink. Press foot pedal to dispense soap. **Note:** The foot pedal may require repeated pumping initially, to create proper siphon pressure.

Waste Water Management
Fluid level in the waste container should be managed in such a way as to avoid overflow. This risk is minimal when operating from a jerry can. When operating from a source greater than the waste jerry can, care should be taken to monitor waste water level carefully.

Shut down procedures
1. Drain all water from the sink basin and clean the drain catch. Dry components before storage.
2. Drain and disconnect the cold water supply line and the drain hose. Use the manual pump to assist in draining the cold water supply line.
3. Disconnect the intake hose from the quick connect labeled “WATER” and reattach it to the quick connect labeled “PURGE”. If the water in the reservoir is to be reclaimed, leave the weighted end of the intake hose in the source jerry can. Otherwise, purge the water in the tank to a waste water jerry can or the ground. **NOTE:** To avoid contamination, minimize intake hose contact with waste water.
4. When water stops flowing from the tank, depress the foot switch briefly. This process will purge the pump and the internal supply lines. Release the foot switch when water ceases to flow from the intake hose.
5. Disconnect all electrical power.
6. Drain and disconnect the intake hose. Disinfect all hoses which have come into contact with waste water using a dilute bleach solution.

7. Store the intake, cold water and drain hoses along with the alternate source regulator in the plumbing pouch. Be sure to coil tubing carefully to avoid kinking. Dry components as thoroughly as possible before storage.

8. Disconnect the ON/OFF foot switch, power cord, and instrument tray. Store these items in the electronics accessories pouch. Disconnect soap dispenser if used and flush out the soap spout. Pack and store dispenser components in pouch with paper towel holder. Clip power entry cord and GFCI to underside of sink.

9. Twist loose and remove the four sink legs and leg supports. Fold and store components in their appropriate pouches.

10. Place sink into the case with the sink sides aligned with case handles. Place the instrument basket into the sink basin. Store the plumbing, electrical, and soap dispenser pouches in the instrument basket. Place the legs pouch across top surface of basin, on left side of spout. Slide the Locking Cap up the sink spout tube and pivot the spout forward until it lies flat with top surface of basin.

11. Close the lid and secure all perimeter latches. *Reference figure A*

**Daily cleaning**

All hoses which have come in contact with waste water during operation must be disinfected with a dilute bleach or equivalent solution, prior to storage. Disinfect exposed sink parts in accordance with conventional medical/dental practice.

**Daily functional checklist**

*Observation of the following conditions will ensure that the ADU-42CF is functioning normally.*

1. The green L.E.D. by the spout lights when the unit is connected to a power source.
2. The pumps can be heard running when the ON/OFF footswitch is depressed.
3. The spout is fully extended.
4. When the tank is filled, the orange L.E.D. lights indicating the heating element is operating.
5. Once primed, the intake lines retain their water level when the pump is not operating.
6. GFCI will trip when test button is pressed, and reset when reset button is pressed.
Maintenance and Servicing Instructions

Cleaning and lubrication

The external surfaces of the ADU-42CF’s chassis, spout, basin and accessory tray can be cleaned with a commercial medical/dental disinfectant. Sink hoses contacting waste water must be disinfected after each session. To minimize the risk of corrosion, chlorine based cleaners should not be used to clean the interior of the water storage tank or the sink’s legs. After a time the lines used in the plumbing may develop a milky mineral deposit. This scale can be reduced by flushing the lines with a dilute bleach or ammonium solution. External components will be sufficiently maintained by a cleaning regimen consistent with standard medical and dental practice. Internal components do not require lubrication or have special cleaning instructions.

Performance verification and Inspection

No specific inspection schedule needs to be maintained for this unit. Components have been selected for their maintenance-free service life. The drain catch should be cleaned after each use. Verifying that the following conditions are satisfied during operation will ensure proper function. These conditions should be verified as the final step of any major repair.

1. The green L.E.D. by the spout lights when the unit is connected to a power source.
2. The pumps can be heard running when the ON/OFF footswitch is depressed.
3. The tank fills when the footswitch has been depressed for approximately two minutes and the orange L.E.D. lights to indicate the heating element is operational.
4. The orange L.E.D. goes out when the nominal water temperature of 106 degrees Fahrenheit (41 degrees Centigrade) is reached.
5. The orange L.E.D. relights and heating resumes when the heated water falls below the nominal water temperature.
6. Once primed, the intake lines retain their water level when the pump is not operating.

Schematic Drawing Set

Refer to the included Schematic Drawing Set (PN 421207) for more detailed information, if needed.
## Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not drawing water, pumps operating</td>
<td>No water source/intake tube above water line.</td>
<td>Add water to source/adjust intake hose</td>
</tr>
<tr>
<td></td>
<td>Solenoid valve closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pump seals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not drawing water, pumps not operating</td>
<td>Circuit breaker tripped</td>
<td>Reset breaker</td>
</tr>
<tr>
<td></td>
<td>Diode</td>
<td>Inspect control board, replace components or board as required</td>
</tr>
<tr>
<td></td>
<td>GFCI tripped</td>
<td>Reset GFCI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inspect pumps, replace if required</td>
</tr>
<tr>
<td>Not heating water, orange LED lit</td>
<td>Circuit breaker tripped</td>
<td>Reset breaker</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inspect control board and heating element, replace components as necessary</td>
</tr>
<tr>
<td></td>
<td>Heating element damaged</td>
<td>Replace element</td>
</tr>
<tr>
<td>Not heating water, orange LED not lit</td>
<td>Tilt level sensor shut off</td>
<td>Ensure sink is standing upright</td>
</tr>
<tr>
<td></td>
<td>Circuit board, thermal sensor</td>
<td>Inspect control board and components, replace as required</td>
</tr>
<tr>
<td></td>
<td>Tank Level sensor</td>
<td>Replace tank level sensor</td>
</tr>
<tr>
<td>Not heating water, green LED not lit</td>
<td>No system power</td>
<td>Check electrical source, GFCI, circuit breakers, and connections.</td>
</tr>
<tr>
<td>Leak at spout</td>
<td>Seal failure</td>
<td>Replace seal</td>
</tr>
<tr>
<td>Water leak from sink bottom</td>
<td>Internal leak</td>
<td>Remove basin and search for leak</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tighten or replace clamps or tubing</td>
</tr>
<tr>
<td></td>
<td>Tank</td>
<td>Tighten fittings</td>
</tr>
</tbody>
</table>
**Disassembly, Repair & Replacement**

**Note:** The unit should only be powered when it is in an upright position. Operation with the tank tilted at an extreme angle can cause the tilt shutoff sensor to actuate, shutting off the heater.  
**Important:** Before beginning any repair, be sure to disconnect the sink from the power source.

**Resetting the Circuit Breakers (Figure L)**

The control board and heating element are protected by a 15A circuit breaker and the pumps are protected by a 0.75A breaker. Both breakers are located next to the power inlet on the bottom of the chassis. A breaker that trips repeatedly is a symptom of a more serious problem with one of the parent components. Inspect the appropriate system elements if a breaker trips continuously, or before replacing a breaker.

Access to internal components is gained by removing the spout guide and the sink chassis.

**Spout guide removal (Figure M)**

**Tools:** Channel lock pliers and 8 in. crescent wrench.

1. Loosen the 1.75 in. hex nut at the base of the spout guide.
2. Remove the spout guide from the heating tank by wrenching on the flats on the sides of the pivotal spout guide.
3. Lift the spout assembly out of the tank.
4. Replace by reversing steps.

**Chassis removal (Figure N)**

**Tools:** 1/8 hex drive or Allen wrench and a 5/16 open-face wrench or crescent wrench

5. Loosen the sixteen screws located around the perimeter of the sink chassis.
6. Lift the sink chassis and locate the chassis ground lead and L.E.D. wiring. Remove L.E.D. wiring connector from the control board. If necessary, remove the ground lead from the sink chassis.
7. Reassemble by reversing steps.

Once the interior of the sink has been accessed the following services can be performed:

**Replacing the heating element (Figure O)**

**Tools:** Phillips screwdriver, 8 in. crescent wrench, and 1/8 hex drive or Allen wrench

1. Dismount tank from support flange.
2. Disconnect the heater ground and power leads at the heating element.
3. Loosen the hardware securing the heating element to the tank.
4. Pull the heating element from the tank.
5. Before replacing, remove old sealant and apply a fresh 1/4-inch bead of RTV sealant around the heater slot. Replace heater by reversing the disassembly steps.
**Replacing the level sensors** *(Figure P)*

**Tools:** 8 in. crescent wrench, 1/4 in. socket, 5/64 in. Allen wrench.

1. Trace the electrical leads from the tank level sensor and tilt shutoff sensor to the control board and remove the wiring connector. Note the wiring configuration from the sensors to the connector. Note the mating connector located on board.
2. Note the orientation, then unscrew the level sensor from the tank. Remove the mounting hardware from the tilt level sensor.
3. Install the new sensors as required. On the tank sensor, make sure the peaked portion of the exposed fitting labeled N.O. (normally open) is positioned upward. Rewire and attach the new electrical connector at the original board location.

**Replacing the electric intake pumps** *(Figure Q)*

**Tools:** Pliers, 5/16 deep well socket or driver, and a flat blade screwdriver

1. Remove the snapper type clamps from each end of the pumps by pushing their tabs in opposite directions. Use pliers to improve clamp manipulation. Work the tubing off each end of the pumps.
2. Loosen the green retaining screws and remove the grounding wires from the pumps.
3. Remove the four nuts which mount the pumps to the bracket and chassis.
4. Trace and disconnect the pumps wiring from the control board and the solenoid valve. Connect the new wires at the old locations.
5. Replace the pump(s) as required and reassemble by reversing steps. Make sure that the flow direction arrow on the new pump(s) points away from the solenoid valve.

**Replacing the pumps and tank tubing and clamps** *(Figure Q)*

**Tools:** Small slip-jaw or flat pliers.

1. Check the clamps and tubing for cracks, splits, and leaks.
2. Remove snapper type clamps by pushing the clamp tabs in opposite directions. Use pliers to improve clamp manipulation. Work the tubing off the barbs at each end.
3. Replace tubing with appropriate length as shown in the Schematic Drawing Set (PN 421207).
4. If necessary, replace clamps with parts as indicated in the Schematic Drawing Set (PN 421207).
5. Secure clamps over tubing at barbs, using pliers if necessary to ensure a tight, leak-free connection.

**Replacing the electronics board** *(Figure R)*

**Tools:** 1/4 open face wrench or crescent wrench, Phillips screwdriver, and pliers

1. Remove the board mounting hardware from each of the four corners of the control board.
2. Wire the new board by tracing the leads from the old board or by following the wiring schematic. **Refer to Figure S.**
3. Secure the new control board in each corner with the mounting hardware.
Replacing the solenoid valve

**Tools:** Pliers, 1/4 socket, 5/64 hex drive or Allen wrench, and 8 in. crescent wrench

1. Remove the snapper type clamp from the end of the solenoid valve by pushing its tabs in opposite directions. Use pliers to improve clamp manipulation. Work the tubing off the end of the valve.

2. Loosen the solenoid ground lead.

3. Disconnect the two flag terminals. **Note:** When reattaching, the flag terminals do not require specific valve tab orientation.

4. Remove the “WATER” quick disconnect from the underside of the chassis base.

5. Remove the four screws holding the solenoid valve to the solenoid adapter.

6. Replace the solenoid valve and reassemble by reversing steps.

Replacing seal in Spout  *Refer to Figure M*

**Tools:** Needle-nose pliers, small screw driver or dental instrument

1. Remove spout from the tank as per Spout Guide Removal.

2. Remove three capscrews from bottom of spout base with Allen wrench.

3. Remove cap and tube assembly.

4. Using a small screwdriver, lift the o-ring from its groove in the bottom of the spout base.

5. Replace the o-ring and reassemble by reversing steps.

Preparation for shipment and long term storage

No special preparations are required for shipment or long term storage. However, proper completion of all steps of the Shut-Down Section is important. The sink’s polypropylene case is internally gasketed to be water tight. Moisture trapped in the case may promote bacteria growth in hot storage conditions and residual water may damage plumbing components in freezing conditions. Be sure to purge the system completely. Disinfect and dry all hoses and external surfaces thoroughly.

Storage of sink components in their proper pouches and locations will best protect them from damage caused by shifting in transport.

After periods of extended storage, cleanse as per the instruction in Cleaning and Lubrication Section.
Figure S - Wiring Schematic