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**INSTALLATION AND SERVICE  
MANUAL  
FOR  
LANCER SERIES 800  
COUNTER ELECTRIC  
DISPENSER**

Manufactured for *The Coca-Cola Company*®

***This Manual supersedes Installation and Service Manual, 28-0601/02, Dated 10/29/98, and is being published ONLY on the Lancer Web Site***



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**Patent Number: 5,499,744**

REV: 10/07/04  
P.N. 28-0601/03

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## SPECIFICATIONS

### DIMENSION

Width	14 inches	(35.56 cm)
Depth	24 3/4 inches	(62.87 cm)
Height (without legs)	27 1/8 inches	(68.90 cm)

### WEIGHT

Shipping	155 pounds	(70.3 kg)
Empty	146 pounds	(66.2 kg)
Operating	220 pounds	(100.0 kg)

### WATER REQUIREMENTS

#### CAUTION

IF WATER SOURCE EXCEEDS 50 PSIG (3.52 KG/CM<sup>2</sup>), A RECOMMENDED WATER REGULATOR ASSEMBLY (PN 18-0253/01) MUST BE USED TO LIMIT WATER PRESSURE TO 50 PSIG (3.52 KG/CM<sup>2</sup>). FAILURE TO USE REGULATOR WILL RESULT IN IMPROPER PERFORMANCE OF DISPENSER.

Minimum flowing pressure of 25 PSIG (1.76 kg/cm<sup>2</sup>, 1.72 BAR)

Maximum static pressure of 50 PSIG (3.52 kg/cm<sup>2</sup>, 3.45 BAR)

### CARBON DIOXIDE (CO<sub>2</sub>) REQUIREMENTS

Minimum pressure of 70 PSIG (4.92 kg/cm<sup>2</sup>, 4.83 BAR)

Maximum pressure of 80 PSIG (5.62 kg/cm<sup>2</sup>, 5.52 BAR)

### ICE BANK WEIGHT

15 to 17 pounds (6.8 to 7.7 kg)

### DRINK CAPACITY

164 - 12 oz drinks under 40°F (4.4°C) at two (2) drinks per minute with 75 (23.9°C) ambient, inlet water, and syrup.

### DISPENSER INSTALLATION HIGHLIGHTS

Listed below are ten (10) critical elements which will aid in a successful installation.

1. Fill water bath until water over flows from tank overflow tube.
2. The carbonator pump motor must be disconnected from the power supply (refer to Section 1.8A) prior to connection to water supply for initial build up of ice bank. Failure to do so will result in automatic shut off of carbonator (see item 6 below) or damage to the pump.
3. If this dispenser is installed in an area that is susceptible to ±10% variation of the nominal line voltage, consider installing a surge protector or similar protection device.
4. There is a **five (5) minute delay** which prevents the compressor and condenser fan from starting until the delay has lapsed. If electrical current is interrupted, there is always a **five (5) minute delay** before the compressor starts.
5. The unit is equipped with a protective timer for the carbonator pump motor, set for three (3) minutes. If the carbonator motor has timed out, it must be manually reset by either momentarily unplugging the unit or switching off the on/off switch (if present). Once power is restored the five (5) minute compressor delay would be in effect.
6. Supply Water Pressure: Minimum - 25 PSIG (1.76 kg/cm<sup>2</sup>); Maximum - 50 PSIG (3.5 kg/cm<sup>2</sup>). If pressure is over 50 PSIG, a water pressure regulator must be used.
7. On units with the built in water regulator, the regulator must be removed if inlet water pressure is less than 25 PSIG.
8. CO<sub>2</sub> Pressure: Recommend nominal pressure 70 PSIG (4.92 kg/cm<sup>2</sup>, 4.83 BAR). Pressure may be reduced to a minimum of 60 PSIG (4.22 kg/cm<sup>2</sup>, 4.13 BAR) if remote syrup pumps are being used. It may be increased to a maximum of 80 PSIG (5.62 kg/cm<sup>2</sup>, 5.52 BAR) only when internal syrup pumps are being used with highly viscous syrups. **Important:** Internal syrup pumps may not work at pressures less than 60 PSIG. CO<sub>2</sub> pressure over 80 PSIG may result in damage or leakage from the syrup pump system or may cause excessive foam in the drink.
9. Bag-in-box (BIB) syrup packages must be within 6' from unit when internal syrup pumps are being used.
10. Valve Adjustment: Make sure drink temperature is below 40°F (4.4°C) before adjusting brix.

## 1. INSTALLATION

### 1.1 RECEIVING

Each unit is completely tested under operating conditions and thoroughly inspected before shipment. At the time of shipment, the carrier accepts the unit and any claim for damage must be made with the carrier. Upon receiving units from the delivering carrier, carefully inspect carton for visible indication of damage. If damage exists, have carrier note same on bill of lading and file claim with carrier.

### 1.2 UNPACKING

- A. Cut plastic banding and remove.
- B. Remove top portion of carton by lifting up.
- C. Remove accessory kit and loose parts from top packaging.
- D. Remove top inner carton pad and corners.
- E. Lift unit up by plywood shipping base and remove lower portion of carton.
- F. Inspect unit for concealed damage and if evident notify delivering carrier and file a claim against same.
- G. Remove plywood shipping base from unit by moving unit so that one side is off the counter top or table allowing access to screws on the bottom of the plywood shipping base.

#### **NOTE**

If unit is to be transported it is advisable to leave the unit secured to the plywood base.

- H. If unit is to be installed with optional legs, assemble legs to unit by tilting unit. *DO NOT LAY UNIT ON ITS SIDE OR BACK.*

### 1.3 UNPACKING INSTALLATION KITS

- A. Inspect kits for concealed damage and if evident, notify delivering carrier and file a claim against same.
- B. Each kit contains a list of the parts and a drawing showing the proper assembly of the parts.

### 1.4 SELECTING A COUNTER LOCATION

- A. Select a location close to a properly grounded electrical outlet and water supply that meet the requirements as scheduled on the SPECIFICATION page.
- B. Counter location must be able to support a minimum of 250 pounds (113.6 kg).

#### **CAUTION**

FAILURE TO MAINTAIN SPECIFIED CLEARANCE WILL CAUSE THE COMPRESSOR TO OVERHEAT AND WILL RESULT IN COMPRESSOR FAILURE.

- C. Condenser air is drawn in the back of the unit and discharged out the top of the unit. A minimum of eight (8) inches (20.3 cm) clearance must be maintained over the top of the unit and a minimum of six (6) inches (15.2 cm) clearance must be maintained behind the unit to ensure proper air circulation. Failure to do so will result in compressor failure.

### 1.5 MOUNTING THE DISPENSER

- A. The dispenser is designed to be permanently mounted and sealed to the counter, or installed on four (4) inch legs.

#### **NOTE**

NSF listed units must be sealed to the counter or have four (4) inch legs installed.

- B. For permanent mounting, use Lancer sealant kit (PN 15-0010) to seal the dispenser to the counter.
- C. For leg mounting, use Lancer leg kit (PN 82-0569).

### 1.6 CONNECTING THE DRAIN

- A. Remove cup rest. Lift splash plate up and pull out and down on the bottom to remove.
- B. Remove the drip tray from the unit and connect the drain tube to the drain fitting located on the back.

C. Route the drain tube to a suitable drain and replace the unit's drip tray.

## 1.7 FILLING UNIT WITH WATER

- A. Remove the bonnet from the unit.
- B. Remove the plastic plug (located on the front of the unit's compressor deck) from the unit's fill hole.

### **CAUTION**

THE WATER BATH COMPARTMENT MUST BE FILLED WITH WATER BEFORE PLUGGING IN THE UNIT, OTHERWISE THE COMPRESSOR DECK AND CONDENSER FAN MAY NOT OPERATE PROPERLY.

- C. Using a funnel or tube, fill the water bath compartment with water until it flows out of the overflow tube into the drip tray.

### **NOTE**

Do **NOT** use distilled water to fill water bath.

- D. Replace the plug.

## 1.8 CONNECTING TO ELECTRICAL POWER

### **WARNING**

**THIS UNIT MUST BE PROPERLY ELECTRICALLY GROUNDED TO AVOID POSSIBLE FATAL ELECTRICAL SHOCK OR SERIOUS INJURY TO THE OPERATOR. THE POWER CORD IS PROVIDED WITH A THREE PRONG GROUNDED PLUG. IF A THREE-HOLE GROUNDED ELECTRICAL OUTLET IS NOT AVAILABLE, USE AN APPROVED METHOD TO GROUND THE UNIT.**

### **CAUTION**

FAILURE TO DISCONNECT THE MOTOR POWER SUPPLY WILL DAMAGE THE CARBONATOR MOTOR AND PUMP AND VOID THE WARRANTY.

- A. If the unit is equipped with a built-in carbonator, disconnect the power supply to the carbonator motor by disconnecting the four pin connector located near the top of the electrical control box on the refrigeration deck.
- B. Check the dispenser serial number plate for unit's correct electrical requirements. *Do not plug into wall electrical outlet unless serial number plate current shown agrees with local current available.*
- C. Route the power supply cord to a grounded electrical outlet of the proper voltage and amperage rating, and plug in the unit. This will turn on the refrigeration system and allow it to start cooling while completing the rest of the installation. The agitator motor will start immediately, but the compressor and fan motor will not start until the five (5) minute delay has elapsed.

## 1.9 CONNECTING TO WATER SUPPLY

### **CAUTION**

IF WATER SOURCE EXCEEDS 50 PSIG (3.52 KG/CM<sup>2</sup>) A WATER REGULATOR KIT MUST BE USED TO LIMIT WATER PRESSURE TO 50 PSIG (3.52 KG/CM<sup>2</sup>). FAILURE TO USE REGULATOR WILL RESULT IN IMPROPER PERFORMANCE OF DISPENSER.

- A. Using tubing and fittings from installation kit, connect tubing assembly to water source. **DO NOT CONNECT TO DISPENSER AT THIS TIME.**
- B. Flush water supply line thoroughly.

### **NOTE**

If the water source is above 50 PSIG (3.52 KG/cm<sup>2</sup>), cut tubing assembly and install Water Regulator Kit (PN 18-0253/01) as shown in kit instruction sheet.

- C. Route through hole in counter and through opening behind splash plate and connect to carbonator pump using a flare seal washer (PN 05-0017). Use a back-up wrench to prevent damage to carbonator pump.
- D. Leave 12 inches (30 cm) of extra tubing length below the counter for servicing and moving the

dispenser.

- E. Turn on water supply and check for leaks.
- F. Using test gauge assembly (PN 22-0138), set regulator at 50 PSIG (3.52 kg/cm<sup>2</sup>).

#### **1.10 CONNECTING THE CO<sub>2</sub> SUPPLY**

- A. Connect high pressure CO<sub>2</sub> regulator assembly to CO<sub>2</sub> cylinder. Use a new CO<sub>2</sub> tank washer if regulator does not have built-in o-ring seal.
- B. Place CO<sub>2</sub> cylinder in service location under counter, etc., and secure it with a safety chain.
- C. Using tubing and fittings from installation kit connect tubing assembly to tank mount regulator using flare seal washer (PN 05-0011). Use a back-up wrench to prevent damage to regulator assembly.
- D. Route gas line through hole in counter and through opening behind the dispenser splash plate.
- E. Leave 12 inches (30 cm) of extra tubing length below the counter for servicing and moving the dispenser.
- F. If the unit is equipped with internal mini-pumps, remove the protective plug from the CO<sub>2</sub> manifold (located on front of mini pumps on right side of unit) and connect the CO<sub>2</sub> supply line using a 1/4 inch elbow (supplied in installation kit.)

#### **CAUTION**

**DO NOT TURN ON THE CO<sub>2</sub> SUPPLY AT THIS TIME**

- G. If dispenser does not have built in syrup pumps, connect directly to the carbonator CO<sub>2</sub> inlet check valve.

#### **1.11 CONNECTING TO BAG-IN-BOX (BIB) SYRUP SUPPLY (Units with built-in Syrup Pumps)**

#### **CAUTION**

THE SYRUP INLET TUBE ASSEMBLIES SHIPPED WITH THE INSTALLATION KIT ARE EIGHT (8) FEET (2.4 M) LONG. THESE LINES CAN BE EXTENDED UP TO A MAXIMUM OF 12 FEET (3.7 M). THE MAXIMUM HEIGHT OF THE PUMPS ABOVE THE LOWEST BIB PACKAGE SHOULD NOT EXCEED EIGHT (8) FEET (2.4 M). IF EITHER THE HEIGHT OF PUMPS OR LENGTH OF INLET LINE LIMITATIONS IS EXCEEDED, REMOTE SYRUP PUMPS OR PRESSURIZED SYRUP CONTAINERS SHOULD BE USED.

- A. Remove the protective caps from the syrup pump inlets and connect syrup inlet tube assemblies furnished in the installation kit to the syrup pumps. Lubricate o-rings before installation using water or an approved FDA lubricant. Be careful not to cut o-rings when installing in pump.
- B. Mark syrup tube assemblies at BIB hose connector end with product ID tape.
- C. Route the syrup supply tubes from the unit through hole in counter to the BIB syrup supply.
- D. Dip hose connectors in a cup of warm water.
- E. Attach the BIB hose connectors to the appropriate syrup flavor.

#### **1.12 CONNECTING TO REMOTE BIB SYRUP PUMPS**

- A. Install the remote BIB, syrup supply and pumps in a convenient location.
- B. Attach the syrup supply tubes to the dispensers syrup inlet fittings (located behind the splash plate) using a 1/4 inch Oetiker clamp for each syrup flavor.
- C. Route the syrup supply tubes to the remote syrup pumps.
- D. Complete installation of the remote syrup pump system following the manufacturer's instructions.

#### **1.13 CONNECTING TO REMOTE PRESSURIZED SYRUP SUPPLY**

- A. Place the five (5) gallon (Fugal) syrup containers and the CO<sub>2</sub> cylinder and regulator in a convenient location.
- B. Attach the syrup supply tube assembly to the dispensers syrup inlet fittings (located behind the splash plate) using a 1/4 inch Oetiker clamp for each syrup flavor.
- C. Route the syrup supply tubes to the Fugal syrup containers and attach them to the appropriate syrup flavor.
- D. Attach a CO<sub>2</sub> supply line from each of the Fugal syrup containers to the low pressure regulator and pressurize the containers.

### 1.14 PURGING THE CARBONATION SYSTEM

- A. The relief valve for the built-in carbonator is located on the left hand side of the unit's carbonator deck. Lift the yellow lever on the top of the relief valve until water flows from the holes in the relief valve. Then release the relief valve.
- B. Reconnect the power supply to the carbonator pump.
- C. Back off on the CO<sub>2</sub> regulator pressure adjusting screw all the way. Open the CO<sub>2</sub> cylinder handle slowly. Turn the CO<sub>2</sub> pressure regulator up slowly to 75 PSIG (5.1 bar).
- D. Open a dispensing valve until water and syrup are flowing steadily from the valve.
- E. Repeat procedure "D" for each valve.
- F. Check all of the unit's syrup, water and CO<sub>2</sub> connections for leaks and repair if necessary.

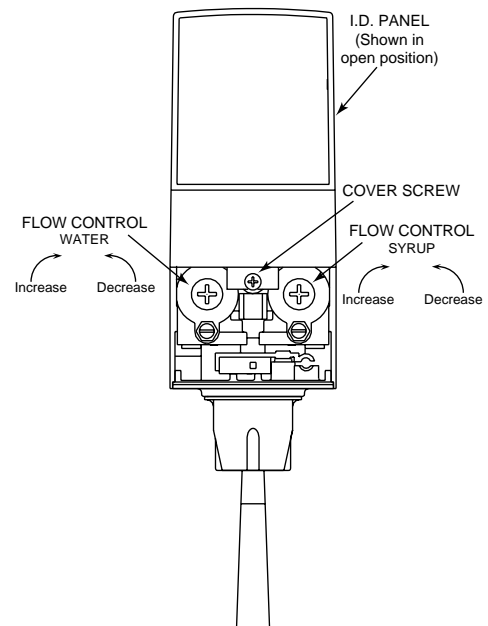
#### NOTE

To check for CO<sub>2</sub> leaks, close the valve on the CO<sub>2</sub> cylinder and observe if the pressure to the system drops with the cylinder valve closed for five (5) minutes. Open the cylinder valve after check.

- G. Replace the unit's bonnet, splash plate and cup rest.

### 1.15 ADJUSTING WATER FLOW

- A. The water flow can be adjusted between 1.25 oz/sec (37 ml/sec) or 2.50 oz/sec (74 ml/sec) on all dispensing valves using the following procedure.
- B. The refrigeration unit should have been running for a least one (1) hour before you attempt to brix the valves. The drink temperature should be no higher than 40°F (4.4°C) when the brix is set. This is best done after the unit has made an ice bank.
- C. Slide up ID panel until flow controls are exposed.
- D. Remove nozzle by twisting counter clockwise and pulling down.
- E. Remove diffuser by pulling down.
- F. Install Lancer (yellow) syrup separator (PN 54-0031) in place of nozzle.
- G. Activate dispensing valve to fill separator syrup tube.
- H. Hold a Lancer brix cup under the syrup separator and dispense water and syrup into cup for four (4) seconds. Divide number of ounces (ml) of water in cup by four (4) to determine water flow rate per second.
- I. To obtain the proper flow, use a screwdriver to adjust water flow control (see Figure 1).
- J. Repeat process for each valve.



**Valve Adjustment  
Figure 1**

### 1.16 ADJUSTING WATER TO SYRUP (RATIO) BRX

- A. Hold the Lancer brix cup under the syrup separator and activate valve. Check brix.
- B. To obtain the proper brix, use screwdriver to adjust syrup flow control (see Figure 1).
- C. Once proper ratio is obtained repeat to verify.
- D. Remove syrup separator.
- E. Install diffuser and nozzle.
- F. Slide down ID panel.
- G. Repeat process for each valve.



## 2. SCHEDULED MAINTENANCE

### **CAUTION**

DO NOT USE ANY POWDERS OR ABRASIVE CLEANING COMPOUNDS WHICH CAN DAMAGE THE FINISH.

#### **2.1 DAILY**

- A. Remove the nozzle and diffuser from each valve and wash them in warm water.
- B. Remove the cup rest and wash in warm soapy water.
- C. Pour warm soapy water into the drip tray and wipe with a clean cloth.
- D. With a clean cloth and warm soapy water, wipe off all exterior surfaces of the unit.
- E. Reinstall the cup rest, valve diffusers and valve nozzles.

#### **2.2 WEEKLY**

- A. Check the flow and brix of each valve following the brixing instructions given in Sections 1.15 and 1.16.

### **CAUTION**

THE WATER BATH COMPARTMENT MUST BE FILLED WITH WATER BEFORE PLUGGING IN THE UNIT, OTHERWISE THE COMPRESSOR DECK AND CONDENSER FAN MAY NOT OPERATE PROPERLY.

- B. Remove the unit's bonnet and check the level of water in the water bath. Replenish as required, and reinstall the bonnet.

### **NOTE**

*Do **NOT** use distilled water to fill water bath.*

#### **2.3 MONTHLY**

- A. Unplug the dispenser from its power source.
- B. Remove the bonnet, and clean the dirt from the unit's condenser using a soft brush.
- C. Reinstall the bonnet and plug in the unit.

#### **2.4 EVERY SIX (6) MONTHS**

- A. Clean and sanitize the unit using the appropriate procedures outlined in Section 3 of this manual.

#### **2.5 YEARLY**

- A. Clean water bath interior, including evaporator coils and refrigeration components.
- B. Clean the entire exterior of the unit.
- C. Sanitize syrup lines.

## 3. DISPENSER CLEANING AND SANITIZING

### **CAUTION**

BECAUSE OF DIFFICULTY IN RINSING, DETERGENT SOLUTIONS SHOULD NOT BE INTRODUCED INTO THE CARBONATOR.

#### **3.1 AMBIENT PROCESS**

- A. The ambient process is the most common method for cleaning and sanitizing dispenser equipment. The detergent should be caustic-based and the sanitizer should be a low pH (7.0) chloride solution.
- B. Disconnect syrup containers and remove product from tubing by purging with carbon dioxide.
- C. Rinse the lines and fittings with clean room temperature water to remove all traces of residual product.
- D. Fill lines with a caustic-based (low-sudsing, non-perfumed, and easily rinsed) detergent solution. The solution should be prepared in accordance with the manufacturers recommendations, but should be at least 2 percent sodium hydroxide. Make sure the lines are completely filled and allow to stand for at least 10 minutes.

- E. Flush the detergent solution from the lines with clean water. Continue rinsing until testing with phenolphthalein shows that the rinse water is free of residual detergent.
- F. Fill the lines with a low pH (7.0) chlorine solution containing at least 50 PPM (50 mg/L) chlorine. Make sure that lines are completely filled and allow to stand for 10 minutes.
- G. Reconnect syrup containers and ready Unit for operation.
- H. Draw drinks to refill lines and flush the chlorine solution from the dispenser.

**NOTE**

Please note that a fresh water rinse cannot follow sanitization of equipment. Purge only with the end use product. This is an NSF requirement.

**WARNING**

**REMOVE SANITIZING SOLUTION FROM DISPENSER AS INSTRUCTED. RESIDUAL SANITIZING SOLUTION LEFT IN SYSTEM COULD CREATE A HEALTH HAZARD.**

- I. Test dispenser in normal manner for proper operation. Taste dispensed product to ensure there is no off-taste. If off-taste is found, additional flushing of dispensing system may be required.

**3.2 ALTERNATE CLEANING AND SANITIZING AGENTS**

- A. The above approach (Section 3.1) to cleaning and sanitizing the dispenser is strongly recommended. However, the Division Quality Assurance Manager may approve the following cleaning and sanitizing agents.
- B. Chlorinated alkaline detergents. *These compounds may be used as the cleaning agent, but may not be used as combined cleaner/sanitizer.*
- C. Iodophors may be substituted for chlorine as the sanitizing agent.

**CAUTION**

IODOPHORS AND QUATERNARY AMMONIUM COMPOUNDS (QUATS) ARE BROAD CLASSES OF COMPOUNDS. SOME MEMBERS OF EACH GROUP CAN CAUSE SERIOUS PROBLEMS WITH FOAMING, DISTORTION OR DISCOLORATION OF POLYMERIC PARTS, POOR RINSIBILITY, AND OFF TASTE. THE RINSIBILITY AND OFF TASTE PROBLEMS HAVE BEEN ESPECIALLY PREVALENT WITH QUATS. BECAUSE OF THE POTENTIAL PROBLEMS, APPROVAL MUST BE GRANTED BY THE DIVISION QUALITY ASSURANCE MANAGER TO SPECIFIC COMPOUNDS. THIS APPROVAL SHOULD BE BASED UPON TESTING IN THE LABORATORY.

- D. Quaternary ammonium compounds may be used as a combined cleaner-sanitizer but are generally not recommended. *These compounds are not to be utilized at concentrations exceeding 200 PPM (200 mg/L), or that concentration specified in local regulations, which ever is lower.*

**4. CONVERTING FROM EXTERNAL PRESSURIZED SYRUP SUPPLY TO BIB WITH BUILT-IN SYRUP PUMPS**

This conversion can be done. Contact Lancer for parts and instructions.

**5. CONVERTING FROM BUILT-IN SYRUP PUMPS TO REMOTE PUMPS OR SYRUP TANKS**

**5.1 REMOVING EXISTING BUILT-IN SYRUP PUMPS**

- A. Disconnect the unit from the power supply and remove the bonnet.
- B. Loosen the valve cover retaining screws and remove the valve covers.
- C. Shut off the water supply to each Valve by turning the water shutoff knob (located on the left hand side of the valve mounting block) clockwise until it stops (see Figure 2).
- D. Prepare three to four (3 to 4) gallons of warm water in a suitable open container.
- E. Disconnect the syrup supply lines from the BIB syrup supply, assemble a BIB adapter to the end of each line, and place the line in the container of warm water.
- F. Open each dispensing valve until the water flowing from the valve shows no discoloration due to syrup.
- G. Remove the syrup supply lines from the warm water and open each dispensing valve to purge the water from the system.

- H. Turn off the CO<sub>2</sub> supply to the unit and disconnect the CO<sub>2</sub> supply line from CO<sub>2</sub> inlet fitting on the built-in pump package.
- I. Disconnect the syrup inlet lines from the built-in syrup pumps and remove them from the unit.
- J. Disconnect the pump's syrup outlet lines from the unit's syrup inlet fittings.
- K. Remove 1/8 inch barbed carbonator CO<sub>2</sub> check valve, if one is present.
- L. Remove the four (4) sheet metal screws that secure the pump assembly to the front support plate and remove the pump assembly from the unit.
- M. Remove braided inlet tubes and elbow. It will be necessary to cut the securing Oetiker clamps.

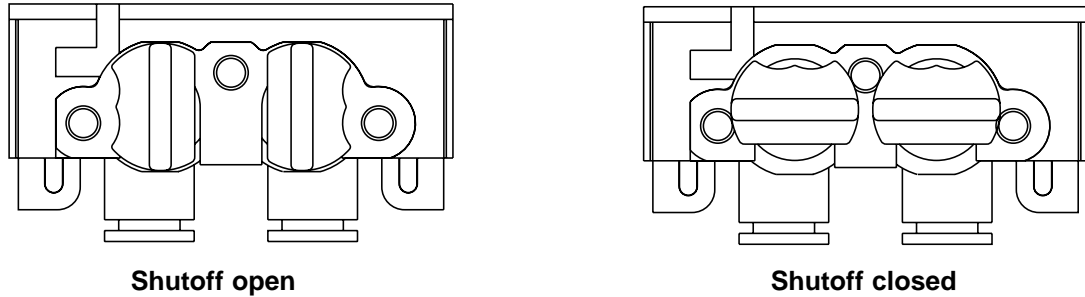


Figure 2

## 5.2 INSTALLING REMOTE PUMP OR SYRUP TANKS

- A. Install new 1/4 inch male flare CO<sub>2</sub> carbonator check valve.
- B. Connect the CO<sub>2</sub> supply line to the carbonator check valve.
- C. Connect the syrup outlet line from each remote pump to the appropriate syrup inlet fitting on the unit using a 1/4 inch Oetiker clamp.

### **NOTE**

Each 1/4 inch braided syrup tube will be looped from the inlet line to the remote pumps. Use caution not to bend, crimp, or kink the 1/4 inch tube at the loop. It may be necessary to use a tie wrap.

- D. Make all necessary connections on remote pump system or syrup tank.
- E. Turn on water (25 to 50 PSIG) and CO<sub>2</sub> (70 to 80 PSIG) supply.
- F. Open each valve until syrup flow is established and check all connections for leaks.
- G. Replace the bonnet and reconnect the unit to the power supply.
- H. Open the water supply to each valve and replace the valve covers.
- I. Brix the valves if necessary (see Sections 1.15 and 1.16).

## 5.3 CONNECTION FOR PLAIN WATER PRODUCT

- A. If plain water product is required, a separate plain water line has been pre-installed for easy connection to the second valve from the left side of the dispenser.
- B. Remove the comb insulation (foam rubber pad) from the top of the inlet tubes.
- C. Using a backup wrench, remove the cap from the plain water line. Save cap for reuse later.
- D. Push soda line out of the way and cap with fitting removed from the plain water line. Ensure that the flare seal washer is in place. Tighten using a backup wrench.
- E. Align the plain water line with the connection to the valve. Ensure that the flare seal washer is in place and lightly tighten by hand. Once the connection is engaged, tighten using a backup wrench.

## 6. TROUBLESHOOTING

<b>TROUBLE</b>	<b>CAUSE</b>	<b>REMEDY</b>
<b>6.1</b> Water leakage around nozzle.	A. Damaged or improperly installed o-ring above diffuser.	A. If damaged, replace. If improperly installed, adjust.
<b>6.2</b> Leakage between upper and lower valve bodies.	A. Gap between upper and lower valve bodies. B. Worn or damaged paddle arm assemblies.	A. Tighten all six (6) retaining screws. B. Replace paddle arm assemblies.
<b>6.3</b> Miscellaneous leakage.	A. Gap between parts. B. Damaged or improperly installed o-rings.	A. Tighten appropriate retaining screws. B. Replace or adjust appropriate o-rings.
<b>6.4</b> Insufficient water flow.	A. Insufficient incoming supply water pressure. B. Shutoff on mounting block not fully open. C. Foreign debris in water flow control. D. Foreign debris in water pump strainer.	A. Verify incoming supply water pressure is a minimum of 25 PSI. B. Open shutoff fully. C. Remove water flow control from upper body and clean out any foreign material to ensure smooth free spool movement. D. Remove water pump strainer and clean.
<b>6.5</b> Insufficient syrup flow.	A. Insufficient CO <sub>2</sub> pressure to BIB pumps. B. Shutoff on mounting block not fully open. C. Foreign debris in syrup flow control.	A. Adjust CO <sub>2</sub> pressure to 80 PSI (minimum 70 PSI) for BIB pumps. B. Open shutoff fully. C. Remove syrup flow control from upper body and clean out any foreign material to ensure smooth free spool movement.
<b>6.6</b> Erratic ratio.	A. Incoming water and/or syrup supply not at minimum flowing pressure. B. Foreign debris in water and/or syrup flow controls.	A. Check pressure and adjust. B. Remove flow controls from upper body clean out any foreign material to ensure smooth free spool movement.
<b>6.7</b> No product dispensed.	A. Water and syrup shutoffs on mounting block not fully open. B. The key switch on an electric valve is in the OFF position. C. Cup lever arm or ID panel actuator on electric valve is not actuating the switch. D. Electric current not reaching electric valve. E. Improper or inadequate water or syrup supply. F. Transformer failure.	A. Open shutoffs fully. B. Turn key switch to ON position. C. Repair. D. Check electric current supplied to valve. If current is adequate, check solenoid coil and switch, and replace if necessary. E. Remove valve from mounting block and open shutoffs slightly and check water and syrup supply. If no supply, check dispenser for freeze up or other problems. F. Reset transformer circuit breaker. If breaker pops again refer to Section 6.23.

TROUBLE	CAUSE	REMEDY
<p><b>6.8</b> Water only dispensed; no syrup; or syrup only dispensed; no water.</p>	<p>A. Water or syrup shutoff on mounting block not fully open.  B. Improper or inadequate water or syrup supply.   C. BIB supply too far from dispenser.  D. CO<sub>2</sub> pressure too low.   E. Stalled or inoperative BIB pump.  F. Kinked line.</p>	<p>A. Open shutoff fully.  B. Remove valve from mounting block and open shutoffs slightly and check water and syrup supply. If no supply, check dispenser for freeze-up or other problems. Ensure BIB connection is engaged.  C. Check that BIB supply is within six (6) feet of the dispenser.  D. Check the CO<sub>2</sub> pressure to the pump manifold to ensure it is between 70-PSI.  E. Check CO<sub>2</sub> pressure and/or replace pump.  F. Remove kink or replace line.</p>
<p><b>6.9</b> No water just syrup. (Ice bank grew to water inlet line to carbonator tank.)</p>	<p>A. Low level.  B. Unit not level.  C. Syrup in water bath.   D. Water cage is out of position.  E. PCB relay sticking.   F. Freon leak.  G. Check water supply.  H. Carbonator timed out.  I. PCB malfunctioning.</p>	<p>A. Add water until it flows from overflow tube.  B. Level unit and add water.  C. Melt ice bank and remove all water. Refill. Locate possible syrup leak area and repair.  D. Reposition water cage.  E. Check continuity of compressor relay. Compressor should time-out in five (5) minutes.  F. Find leak and recharge unit. (If unit is not frozen.)  G. Turn on water and shut unit OFF, then ON, to reset carbonator.  H. Turn unit OFF then ON to reset carbonator.  I. Replace PCB.</p>
<p><b>6.10</b> Valve will not shut off.</p>	<p>A. Cup lever may be sticking or binding.  B. Switch not actuating freely.  C. Solenoid armature not returning to bottom position.</p>	<p>A. Correct or replace lever.  B. Check switch for free actuation.  C. Replace defective armature or spring.</p>
<p><b>6.11</b> Syrup only dispensed. No water, but CO<sub>2</sub> gas dispensed with syrup.</p>	<p>A. Improper water flow to dispenser.  B. Carbonator pump motor has timed out.   C. Liquid level probe not connected properly to PCB.  D. Faulty PCB assembly.  E. Faulty liquid level probe.  F. Water bath frozen.   G. Water line frozen.</p>	<p>A. Check for water flow to dispenser (see Section 6.4).  B. Reset by turning the unit OFF and then ON by using the ON/OFF switch on top of the unit or unplugging unit momentarily.  C. Check connections of liquid level probe to PCB assembly.  D. Replace PCB assembly.  E. Replace liquid level probe.  F. Thaw water bath and repair faulty component. (See refrigeration related symptoms.)  G. Refer to Section 6.14.</p>
<p><b>6.12</b> Excessive foaming.</p>	<p>A. Incoming water or syrup temperature too high.  B. CO<sub>2</sub> pressure too high.</p>	<p>A. Correct prior to dispenser. Consider larger dispenser or pre-cooler.  B. Adjust CO<sub>2</sub> pressure downward, but not less than 70 PSI.</p>

(Section 6.12 continued on next page.)

TROUBLE	CAUSE	REMEDY
<i>(Section 6.12 continued from previous page.)</i>		
	C. Water flow rate too high. D. Nozzle and diffuser not properly installed. E. Nozzle and diffuser not clean. F. Air in BIB lines. G. Poor quality ice. H. High beverage temperature.	C. Readjust and reset ratio. Refer to Section 1.16. D. Remove and reinstall properly. E. Remove and clean. F. Bleed air from BIB lines. G. Check quality of ice used in drink. H. Check refrigeration system.
<b>6.13</b> Water continually overflows from water bath into drip tray.	A. Loose water connection(s). B. Flare seal washer leaks. C. Faulty water coil.	A. Tighten water connections. B. Replace flare seal washer. C. Replace water coil.
<b>6.14</b> Compressor starts and continues to run until freeze up and will not cut off.	A. PCB malfunctioning or faulty ice bank probe. B. Ice bank probe positioned improperly. C. Ice bank probe shorted to ground.	A. Disconnect ice bank probe from PCB. 1. If compressor continues to run, replace PCB. 2. If compressor stops, replace ice bank probe. B. Check positioning of ice bank probe, and replace if needed. C. Replace ice bank probe.
<b>NOTE:</b> First check to ensure that the three (3) minute carbonator timer has not timed out. Turn unit off and then on. If the pump shuts off in less than 30 seconds, the dispenser is not frozen.		
<b>6.15</b> Warm drinks.	A. Restricted airflow. B. Dispenser connected to hot water supply. C. Refrigeration system not running. D. Refrigerant leak. E. Condenser fan motor not working. F. Dirty condenser. G. Dispenser capacity exceeded.	A. Check clearances around sides, top, and inlet of unit. Remove objects blocking airflow through grill. B. Switch to cold water supply. C. Refer to Sections 6.16 - 6.20. D. Repair and recharge. E. Replace condenser fan motor. F. Clean condenser. G. Add pre-cooler or replace with larger dispenser.
<b>6.16</b> Compressor does not start (no hum), condenser fan motor does not run and no ice bank.	A. There is a five (5) minute compressor and condenser fan delay. B. Ice bank probe not completely submerged. C. Circuit breaker or fuse tripped. D. Inadequate voltage. E. PCB malfunctioning. F. Incorrect wiring. G. Faulty ice bank probe. H. Transformer failure. I. Ice bank probe not connected properly to PCB.	A. Allow for five (5) minute delay to lapse. B. Fill water reservoir until water flows from overflow tube. C. Reset breaker or replace fuse. If problem persists: 1. Determine reason and correct. 2. Electrical circuit overloaded; switch to another circuit. D. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage. E. Replace PCB assembly. F. Refer to wiring diagram and correct. G. Replace ice bank probe. H. Reset transformer circuit breaker. If breaker pops again, refer to Section 6.25. I. Connect ice bank probe to PCB.

<b>TROUBLE</b>	<b>CAUSE</b>	<b>REMEDY</b>
<b>6.17</b> Compressor does not start (no hum), but condenser fan motor runs.	A. Compressor relay or overload malfunctioning. B. Inadequate voltage.  C. Incorrect wiring. D. Compressor malfunctioning.	A. Replace compressor relay or overload. B. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage. C. Refer to wiring diagram and correct. D. Replace compressor.
<b>6.18</b> Compressor does not start but hums.	A. Inadequate voltage.  B. Incorrect wiring. C. Starting relay malfunctioning.  D. Compressor malfunctioning.	A. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage. B. Refer to wiring diagram and correct. C. Replace starting relay. Be sure to use correct relay. Failure to use correct relay will cause compressor failure. D. Replace compressor or deck.
<b>6.19</b> Compressor starts but does not switch off start winding (will run for only a few seconds before internal overload switches compressor off).	A. Inadequate voltage. B. Incorrect wiring. C. Starting relay malfunctioning.	A. Measure voltage across common and run terminal on compressor. B. Refer to wiring diagram and correct. C. Replace starting relay. Be sure to use correct relay. Failure to use correct relay will cause compressor failure.
<b>6.20</b> Compressor starts and runs a short time but shuts off on overload.	A. Dirty condenser. B. Insufficient or blocked air flow.  C. Inadequate voltage.  D. Incorrect wiring. E. Defective condenser fan motor. F. Refrigerant leak. G. Compressor malfunctioning.	A. Clean the condenser. B. Remove all obstructions and allow for minimum clearances of eight (8) inches (20.3 cm) over top. C. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage. D. Refer to wiring diagram and correct. E. Replace condenser fan motor. F. Repair and recharge. G. Replace compressor.
<b>6.21</b> Compressor runs normally, but water line is frozen.	A. Low water level in water bath. B. Syrup in water bath.  C. Water cage is out of position. D. Low freon charge/slow freon leak	A. Add water to water bath until water runs out of overflow into drip tray. B. Drain water from water bath and refill with clean water. C. Reposition water cage. D. Find and repair leak. Recharge system.
<b>6.22</b> Compressor cycles on and off frequently during the initial pulldown and/or normal operations.	A. PCB malfunctioning B. Defective probe.	A. Replace PCB assembly. B. Replace probe.
<b>6.23</b> Circuit breaker popping.	A. Valve wire harness shorted to itself or to faucet plate.	A. Detect short by disconnecting input faston to keylock and single pin connector. Restore power if breaker doesn't pop. Then valve wire harness is shorted, if OK, Re-connect.

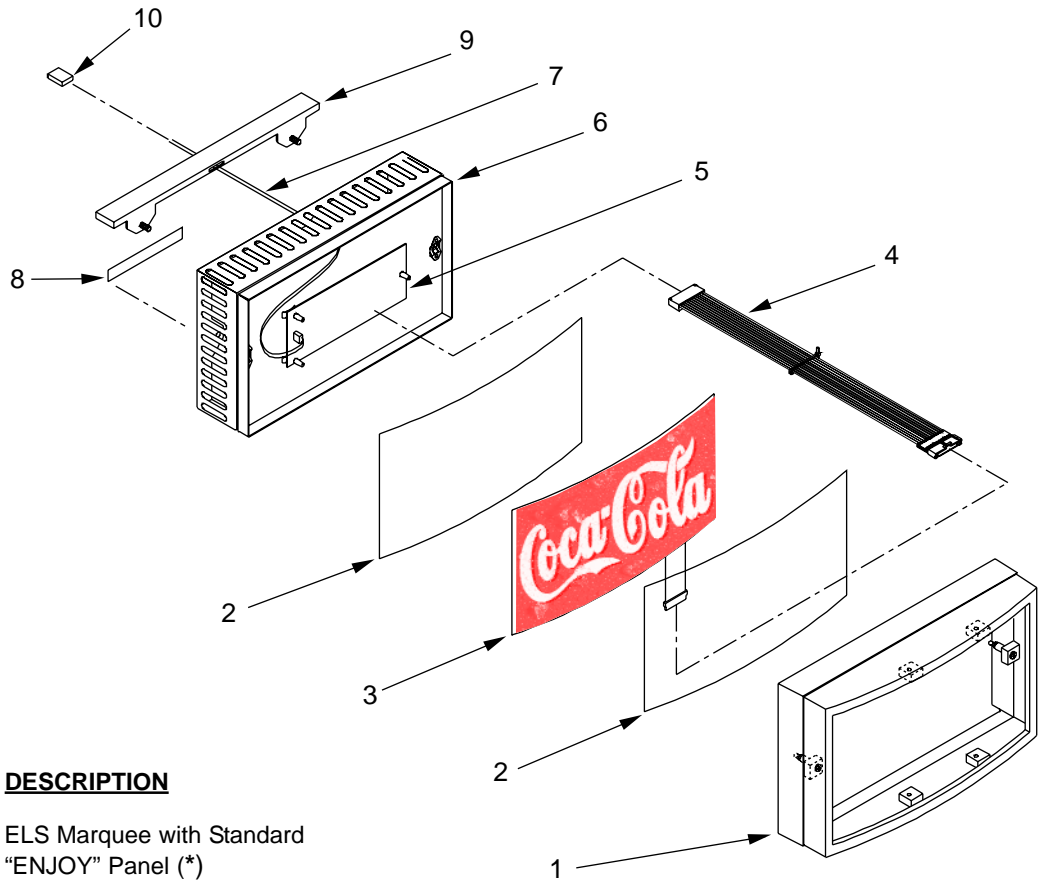
(Section 6.12 continued on next page.)

TROUBLE	CAUSE	REMEDY
<i>(Section 6.12 continued from previous page.)</i>		
	<ul style="list-style-type: none"> <li>B. PCB is bad.</li> <li>C. Secondary wire harness is bad.</li> <li>D. Transformer failure.</li> </ul>	<ul style="list-style-type: none"> <li>B. Detect short by disconnecting J1 connector (24 VAC input) from PCB. Restore power, if breaker doesn't pop. Then replace PCB. If breaker does pop, then PCB is OK. Reconnect J1 connector.</li> <li>C. If it does not pop, locate short in secondary harness between transformer, PCB and valve wire harness.</li> <li>D. Detect short by disconnecting both transformer fastons and restore power. If breaker does pop, replace transformer.</li> </ul>
<b>6.24</b> BIB pump does not operate when dispensing valve is opened.	<ul style="list-style-type: none"> <li>A. Out of CO<sub>2</sub>, CO<sub>2</sub> not turned on, or low CO<sub>2</sub> pressure.</li> <li>B. Out of syrup.</li> <li>C. BIB connector not tight.</li> <li>D. Kinks in syrup or gas lines.</li> </ul>	<ul style="list-style-type: none"> <li>A. Replace CO<sub>2</sub> supply, turn on CO<sub>2</sub> supply, or adjust CO<sub>2</sub> pressure to 70-80 PSI.</li> <li>B. Replace syrup supply.</li> <li>C. Fasten connector tightly.</li> <li>D. Straighten or replace lines.</li> </ul>
<b>6.25</b> BIB pump operated but no flow.	<ul style="list-style-type: none"> <li>A. Leak in syrup inlet or outlet line.</li> <li>B. Defective BIB pump check valve.</li> </ul>	<ul style="list-style-type: none"> <li>A. Replace line.</li> <li>B. Replace BIB pump.</li> </ul>
<b>6.26</b> BIB pump continues to operate when bag is empty.	<ul style="list-style-type: none"> <li>A. Leak in suction line.</li> <li>B. Leaking o-ring on pump inlet fitting.</li> </ul>	<ul style="list-style-type: none"> <li>A. Replace line.</li> <li>B. Replace o-ring.</li> </ul>
<b>6.27</b> BIB pump fails to restart after bag replacement.	<ul style="list-style-type: none"> <li>A. BIB connector not on tight.</li> <li>B. BIB connector is stopped up.</li> <li>C. Kinks in syrup line.</li> </ul>	<ul style="list-style-type: none"> <li>A. Tighten BIB connector.</li> <li>B. Clean out or replace BIB connector.</li> <li>C. Straighten or replace line.</li> </ul>
<b>6.28</b> BIB pump fails to stop when dispensing valve is closed.	<ul style="list-style-type: none"> <li>A. Leak in discharge line or fittings.</li> <li>B. Empty BIB.</li> <li>C. Air leak on inlet line or bag connector.</li> </ul>	<ul style="list-style-type: none"> <li>A. Repair or replace discharge line.</li> <li>B. Replace BIB.</li> <li>C. Repair or replace.</li> </ul>
<b>6.29</b> No product out light.	<ul style="list-style-type: none"> <li>A. Burned-out lamp.</li> <li>B. Faulty wiring or pressure switch in product line.</li> </ul>	<ul style="list-style-type: none"> <li>A. Replace lamp.</li> <li>B. Repair or replace.</li> </ul>
<b>6.30</b> Low or no carbonation.	<ul style="list-style-type: none"> <li>A. Low or no CO<sub>2</sub>.</li> <li>B. Excessive water pressure.</li> <li>C. Worn or defective carbonator pump.</li> </ul>	<ul style="list-style-type: none"> <li>A. Check CO<sub>2</sub> supply. Adjust CO<sub>2</sub> pressure to 70 PSI.</li> <li>B. Water regulator should be set at 50 PSI.</li> <li>C. Replace carbonator pump.</li> </ul>



## 7. ILLUSTRATIONS, PARTS LISTINGS, AND WIRING DIAGRAMS

### 7.1 800 CED - "ELS" LIGHTED MARQUEE ASSEMBLY



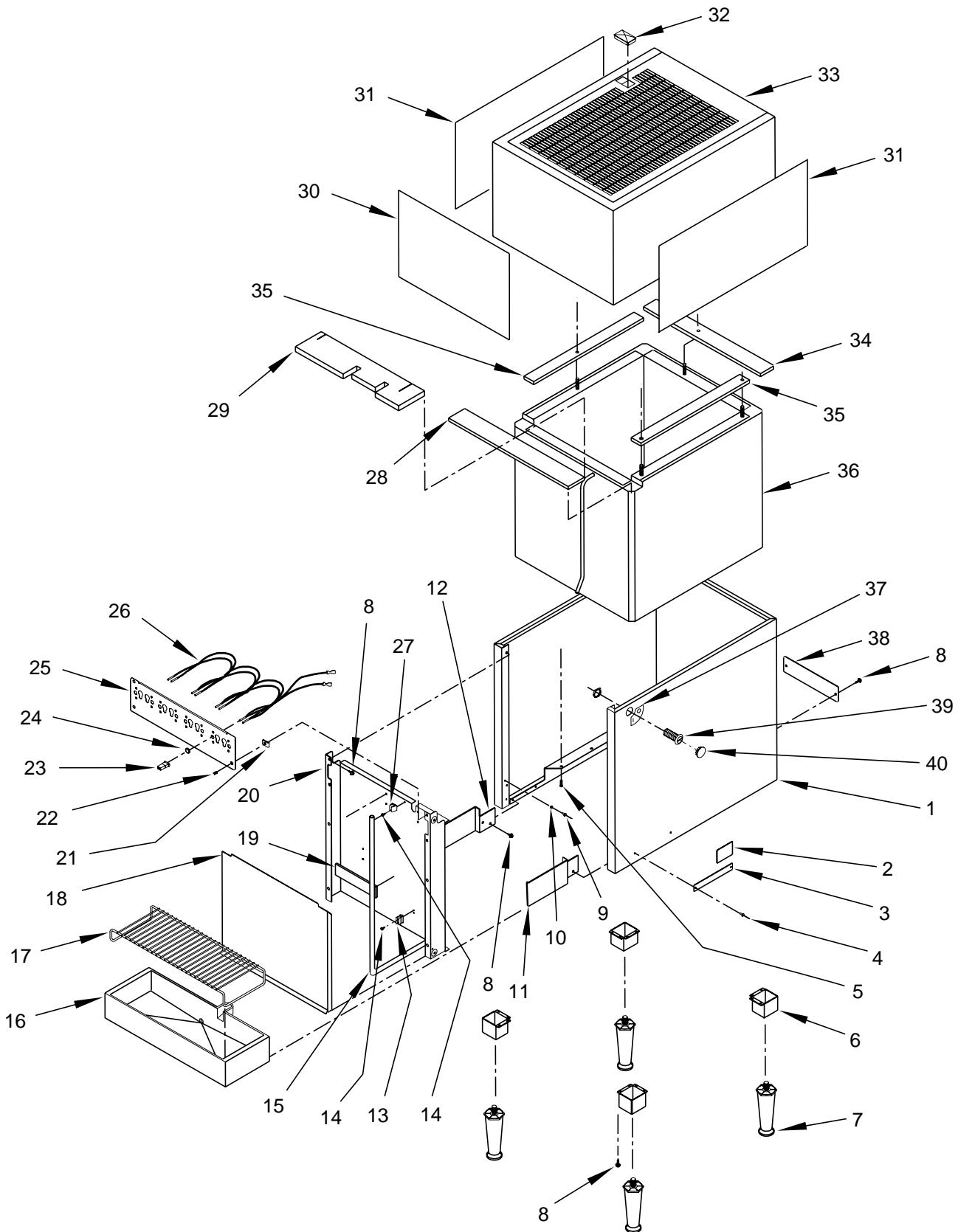
ITEM	PART NO.	DESCRIPTION
-	82-2573	ELS Marquee with Standard "ENJOY" Panel (*)
-	82-2649	ELS Marquee Retrofit Kit with Standard "ENJOY" Panel (*, **)
1	54-0324	Front Housing
2	27-0108	Clear Lens
3	82-2573	ELS Marquee with Standard "ENJOY" Panel (*)
4	52-2125	ELS Jumper Harness
5	52-1956	PCB, ELS Lamp Driver
6	52-1966	Reflector Assy
7	52-2113	Power Harness
8	06-2037	Label, CAUTION
9	51-5584	Bracket
10	11-0015	Plug Housing

\* For Graphics other than "ENJOY", add the following to the end of the base number:

- 01 "DISFRUTA" Graphics
- 02 "DISFRUTE" Graphics
- 03 "TOME" Graphics
- 05 "BEBA" Graphics

\*\* The Retrofit Kit works with existing Series 800 CED/CCD Marquees

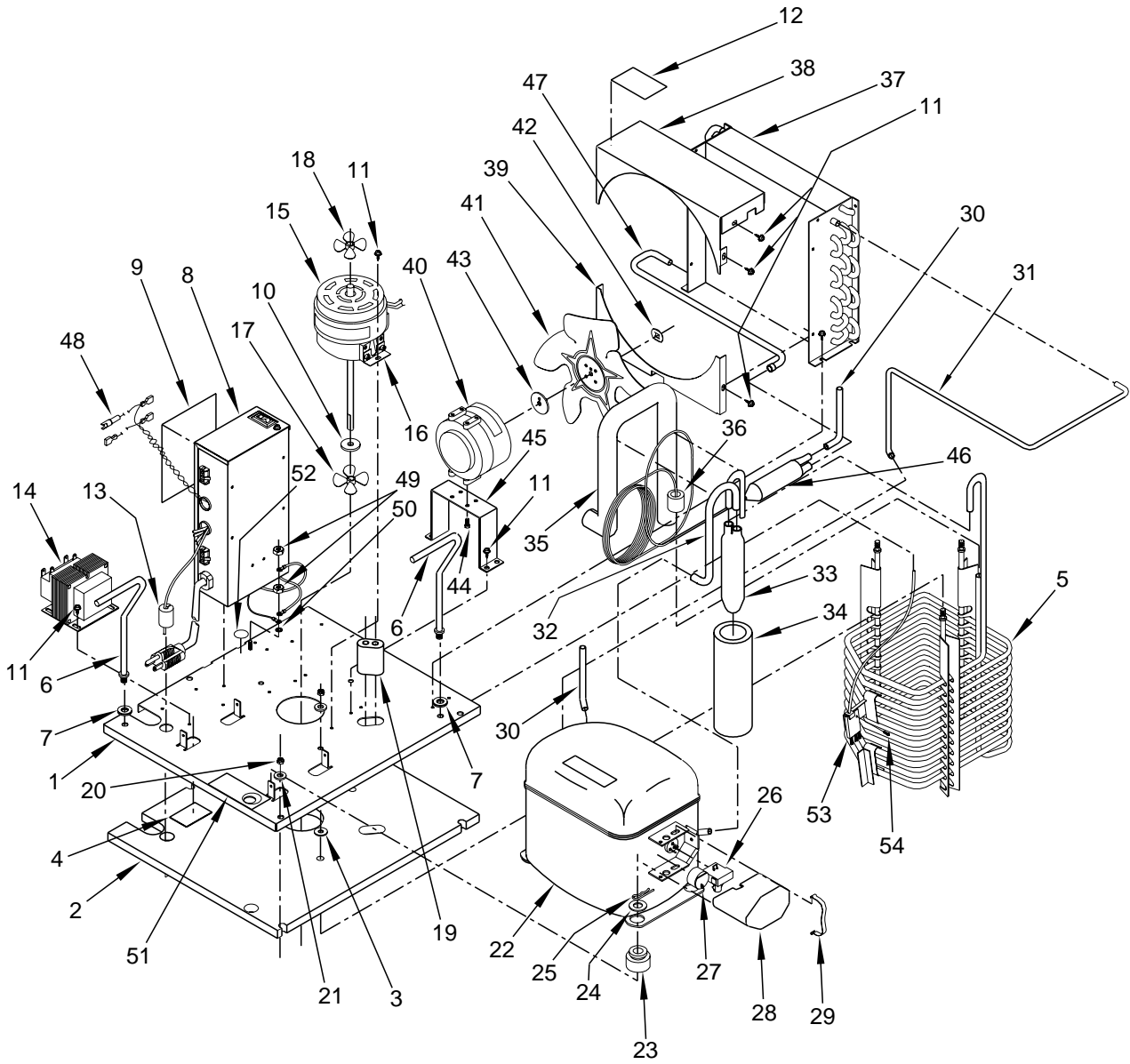
7.2 800 CED - CABINET ASSEMBLY



## 7.2 800 CED - CABINET ASSEMBLY (CONTINUED)

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
-	REF	Cabinet Assy, 800 CED
-	82-2634	Cabinet Assy, 800 CED, Painted
-	82-2635	Cabinet Assy, 800 CED, SS
1	51-5481	Wrapper Assy
2	06-0075-01	Nameplate, Serial Number
3	06-0075-84	Nameplate, 804 Model
4	04-0072	Rivet
5	04-0545	Screw, 8 - 16 x .780, Plastite
6	51-0494	Leg Bracket Assy
7	81-0112	Leg
-	82-0569	Leg Kit (Includes items #6, #7 & #8)
8	04-0061	Screw, 8 - 18 x .375 AB
9	04-0429	Rivet
10	04-0187	Spacer, SS
11	30-0587	Bracket, Drip Tray, Right
12	30-0588	Bracket, Drip Tray, Left
13	03-0115	Clip, Retaining
14	04-1002	Screw, 4 - 40 x 0.250, Rolok
15	82-1422	Drain Assy
16	05-0889	Drip Tray
17	23-0933	Cup Rest
18	30-6883	Splash Plate
19	06-0851	Label, Overflow
20	REF	Front Support
-	30-6882	Front Support, SS
-	30-6999	Front Support, Painted
21	04-0074	Nut, Clip
22	04-0068	Screw, 10 - 24 x 0.375 FH, Machine
23	11-0015	Socket, Housing
24	13-0005	Bushing
25	30-6977	Faucet Plate, 4 Valve
26	52-1216	Harness Assy
27	03-0036	Clip, Retaining
28	50-0256	Insulation, Front
29	50-0258	Insulation, Comb
30	REF	Graphic, Front (Contact Customer Service)
31	REF	Graphic, Side (Contact Customer Service)
32	05-0786	Plug, Bonnet
33	23-1145	Bonnet Assy, Red
34	50-0260	Insulation, Back
35	50-0255	Insulation, Side
36	REF	Tank Assy, Foamed
-	82-1280	Tank Assy, Foamed, Painted
-	82-2031	Tank Assy, Foamed, SS
37	06-0881	Label, Key Switch (Electric Valve Units Only)
38	07-0490	Cover Plate
39	12-0097	Key Switch (Electric Valve Units Only)
40	05-1502	Plug (Mechanical Valve Units Only)

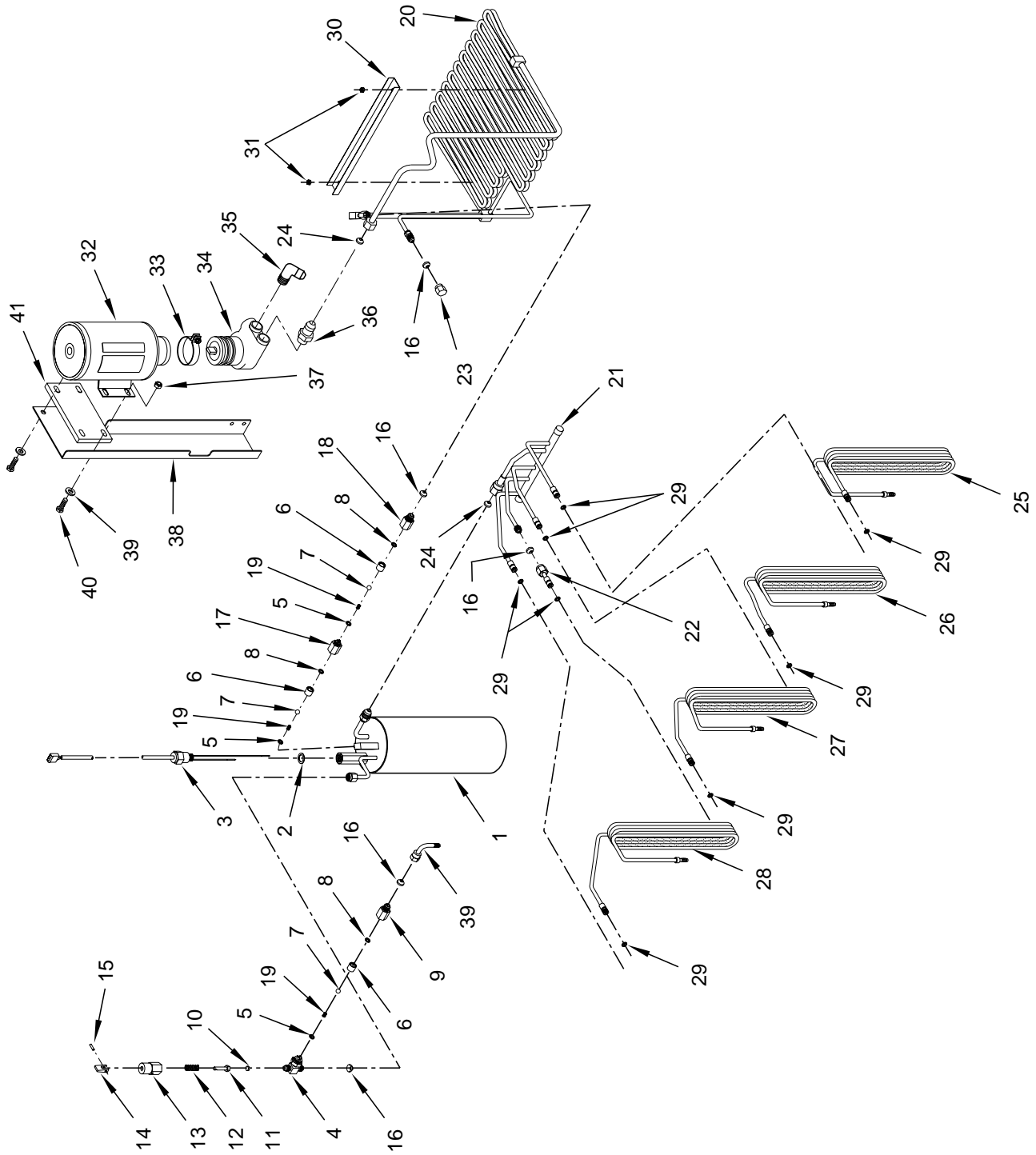
### 7.3 800 CED - REFRIGERATION DECK ASSEMBLY



### 7.3 800 CED - REFRIGERATION DECK ASSEMBLY (CONTINUED)

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
-	82-1408/03	Deck Assy, Refrig.,R-134a, 230V/50Hz, Export	35	50-0205	Insulation, Tube
-	82-1409/03	Deck Assy, Refrig., R-134a, 220V/60Hz, Export	36	50-0159	Insulation, Tube
-	82-1410/03	Deck Assy, Refrig., R-134a, 115V/60Hz, Export	37	23-0985	Condenser, R-134a
-	82-1364/03	Deck Assy, Refrig., R-134a, 115V/60Hz, Domestic	38	30-5881	Shroud, Fan, Top
1	51-5129	Sub Assy, Compressor Deck	39	30-5882	Shroud, Fan, Bottom
2	50-0257	Insulation, Compressor Deck	40	REF	Motor, Fan
3	04-0063	Washer, Flat	-	91-0007	Motor, Fan, 115V/60Hz
4	89-0014	Cover, Hole	-	91-0009	Motor, Fan, 230V/50Hz and 220V/60 Hz
5	23-0956/01	Evaporator Coil Assy	41	07-0354	Blade, Fan
6	51-0068	Handle	42	04-0060	Nut
7	04-0574	Washer	43	02-0034	Silencer
8	REF	Control Housing Assy	44	04-0059	Screw
-	52-1551/01	Control Housing Assy, without "ON-OFF" Switch	45	30-5835/01	Bracket, Fan Motor
-	52-1550/01	Control Housing Assy, with "ON-OFF" Switch	46	23-0932	Dryer Cap Assy, R-134a
9	06-1150	Label, Wiring Diagram	47	47-1285	Tube, Condenser, Out
10	02-0032	Washer	48	52-1213	Harness Assy, Transformer, Secondary
11	04-0504	Screw, 8 - 18 x 0.375	49	04-0110	Nut, 8 - 32
12	06-0080-01	Label, Nameplate	50	04-0576	Washer, Int., Tooth
13	02-0041	Seal	51	06-0856/01	Label, Fill Hole
14	REF	Transformer	52	06-0877	Label, Ground
-	25-0047	Transformer, 115V/60Hz	53	52-1773	Probe Assy, IBC
-	25-0048	Transformer, 230V/50Hz and 220V/60Hz	54	04-0470	Screw
15	REF	Motor Assy			
-	52-1262	Motor Assy, 230V/50Hz and 220V/60Hz			
-	52-1261	Motor Assy, 115V/60Hz			
16	30-5113	Bracket, Agitator			
17	05-0495	Propeller, 2.062 DIA			
18	05-0502	Propeller, 2.250 DIA			
19	02-0040	Seal, Extrusion			
20	04-0032	Nut, Nylok, 1/4 - 20			
21	04-0033	Washer, Flat (0.281 ID)			
22	REF	Compressor			
-	83-0033	Compressor, R-134a, 115V/60Hz			
-	83-0034	Compressor, R-134a, 230V/50Hz			
-	83-0038	Compressor, R-134a, 220V/60Hz			
23	02-0114	Grommet			
24	04-0537	Washer, Flat (0.467 ID)			
25	03-0150	Retainer, Clip			
26	REF	Relay			
-	12-0005	Relay, R-134a, 115V/60Hz			
-	12-0031	Relay, R-134a, 230V/50Hz			
-	12-0028	Relay, R-134a, 220V/60Hz			
27	REF	Overload			
-	12-0223	Overload, R-134a, 115V/60Hz			
-	12-0032	Overload, R-134a, 230V/50Hz			
-	12-0253	Overload, R-134a, 220V/60Hz			
28	13-0006	Cover, Terminal			
29	03-0040	Bale Strap			
30	47-0344	Tube, Process			
31	47-1233	Tube, Compressor (Hi Side)			
32	47-1232	Tube, Return (Lo Side)			
33	51-0061	Accumulator			
34	50-0211	Boot			

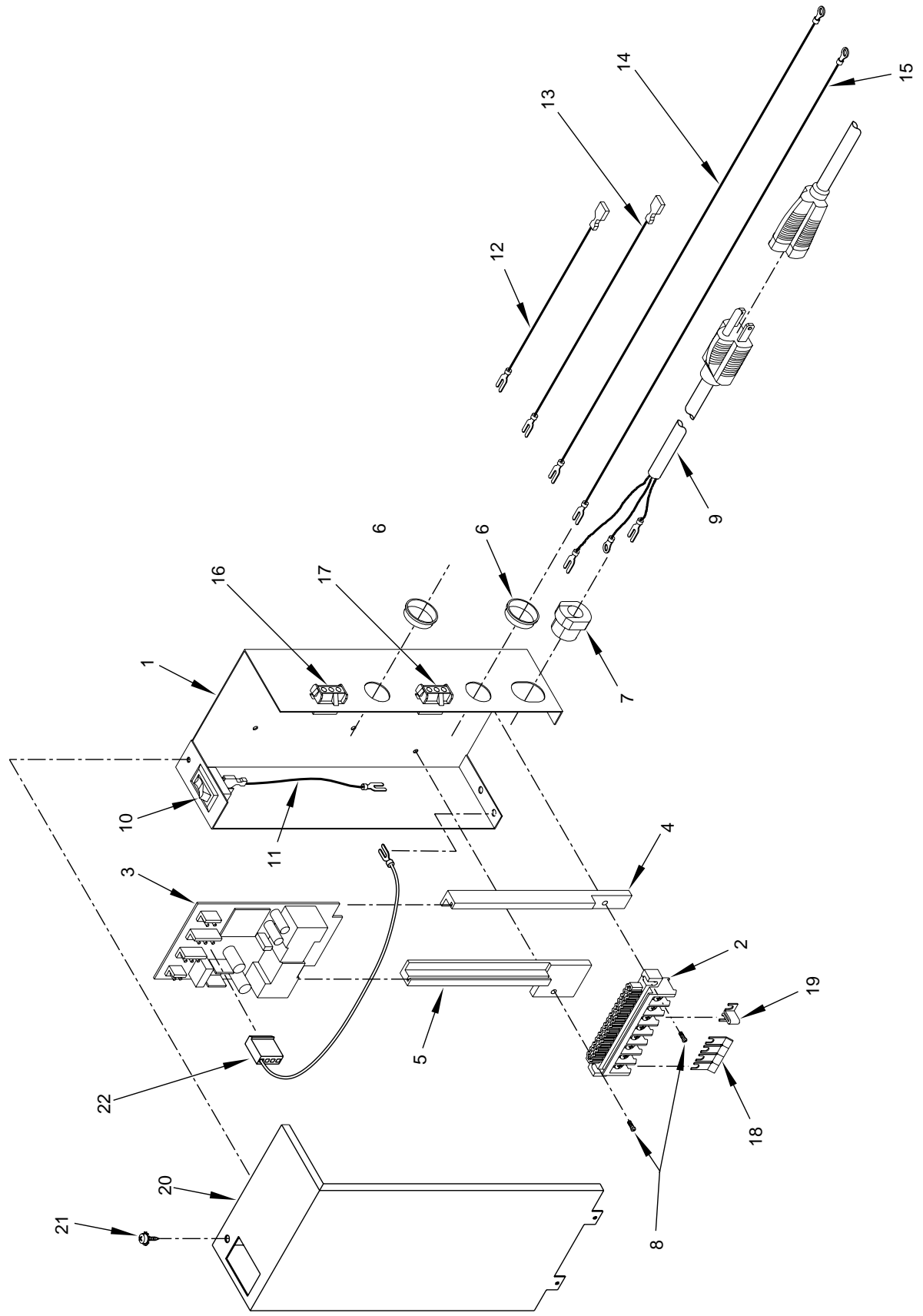
7.4 800CED - CARBONATOR/WATER/SYRUP LINE ASSEMBLIES



#### 7.4 800 CED - CARBONATOR/WATER/SYRUP LINE ASSEMBLIES (CONTINUED)

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
-	REF	Carbonator Assy	39	04-0033	Washer, 1/4 x 0.065 THK
-	82-2258	Carbonator Assy, EIBC	40	04-0520	Bolt, 1/4 - 20 x 0.500
-	82-2638	Carbonator Assy, EIBC (for use with Internal Mini-Pumps)	41	50-0309	Insulation, Carb Bracket
1	23-1245	Tank Assy, Carbonator	42	01-0424	Fitting, Elbow, 1/4"
2	02-0096	Washer, Plastic			(Note: Item #42 is <b>NOT</b> used on units with Internal Mini-Pumps)
3	52-0909	Probe Assy			
-	17-0468	Fitting Assy, CO <sub>2</sub> IN (for use with Internal Mini-Pumps)			
-	17-0469	Fitting Assy, CO <sub>2</sub> IN (for use without pumps)			
4	01-1311	Fitting Sub Assy, CO <sub>2</sub>			
5	02-0003	O-Ring			
6	01-0689	Sleeve			
7	01-0674	Ball			
8	02-0025	O-Ring			
9	REF	Body, Check Valve			
-	01-1334	Body, Check Valve, Barb (for use with Internal Mini-Pumps)			
-	01-0669	Body, Check Valve, Flare			
-	54-0066	Relief Valve Assy			
10	02-0023	Seat			
11	05-0536	Stem			
12	03-0024	Spring			
13	05-0537	Body, Relief Valve			
14	05-0525	Lever			
15	81-0196	Pin			
16	05-0011	Flare Seal Washer, Small			
-	17-0435	Double Check Valve Assy			
17	01-1469	Fitting, Check Valve			
18	01-0670	Body			
19	03-0021	Spring			
20	48-0914	Water Line Assy			
21	48-1444	Manifold Assy			
22	48-1447	Adapter, CO <sub>2</sub> , Water out			
23	01-0204	Cap			
24	05-0017	Flare Seal Washer, Large			
25	48-1427	Tube Assy, Syrup No. 1			
26	48-1428	Tube Assy, Syrup No. 2			
27	48-1430	Tube Assy, Syrup No. 3			
28	48-1431	Tube Assy, Syrup No. 4			
29	02-0005	O-Ring			
30	30-5959	Bracket, Water Line			
31	04-0082	Nut, 10 - 24			
-	REF	Pump, Carbonator, Assy			
-	82-2204	Pump Assy, 115V/60Hz (includes items #32 - #36)			
-	82-2193	Pump Assy, 220V/50 or 60Hz (includes items #32 - #36)			
32	REF	Motor, Pump			
-	91-0063	Motor, Pump, 115V/60Hz			
-	91-0065	Motor, Pump, 220V/50 or 60Hz			
33	07-0017	Clamp			
34	86-0085	Pump Assy			
35	01-0987	Fitting, Elbow			
36	01-0334	Fitting, Straight			
37	04-0032	Nut, Lock, 1/4 - 20, SS			
38	30-6656	Bracket, Pump			

7.5 800CED - CONTROL HOUSING ASSEMBLY





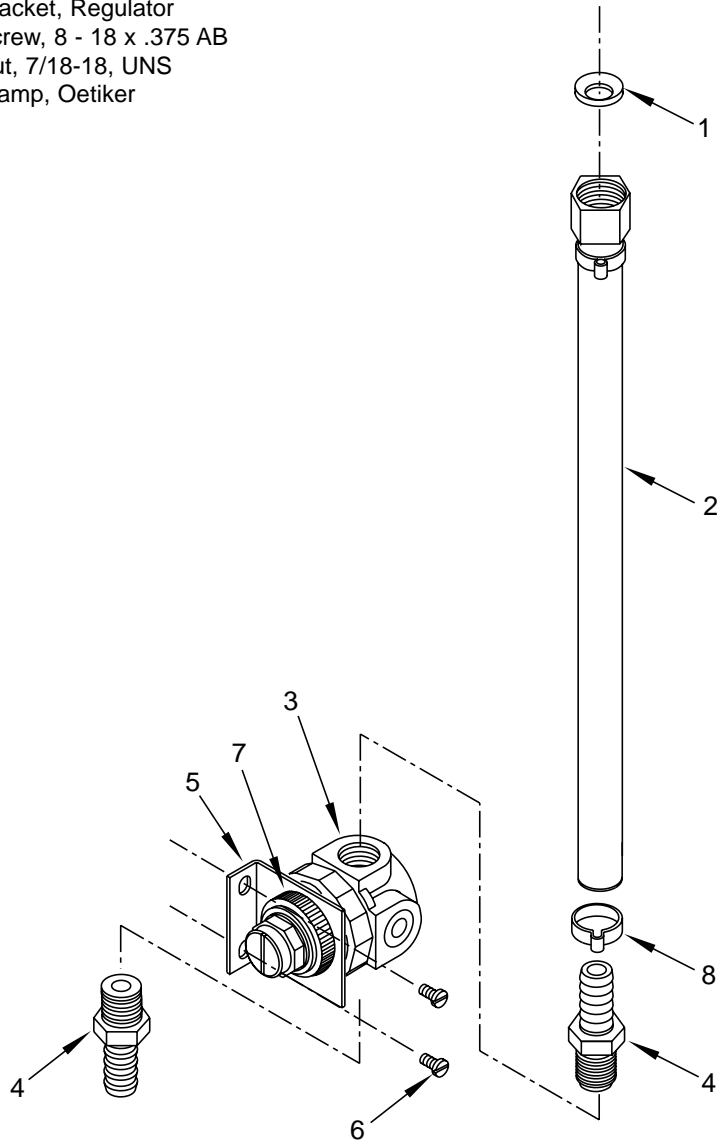
## 7.5 800 CED - CONTROL HOUSING ASSEMBLY (CONTINUED)

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
-	52-1551/01	Control Housing, without ON/OFF Switch
-	52-1550/01	Control Housing, with ON/OFF Switch
1	30-6156	Control Housing
2	11-0185/01	Terminal Block
3	52-0952/01	PCB Assy
4	05-0570	Guide, Right
5	05-0571	Guide, Left
6	13-0059	Bushing
7	13-0028	Strain Relief
8	04-0710	Screw, 6 - 32 x 0.750
9	52-1219	Power Cord Assy, with ON/OFF Switch
9a	52-1218	Power Cord Assy, without ON/OFF Switch
10	12-0089	ON/OFF Switch
11	52-0868	Lead Assy, ON/OFF Switch
12	52-0904	Lead Assy, Trans., Primary, #1
13	52-0905	Lead Assy, Trans., Primary, #2
14	52-0906	Lead Assy, Compressor, #1
15	52-0907	Lead Assy, Compressor, #2
16	52-1480	Harness Assy, Carbonator
17	52-1210	Harness Assy, Recirc.
18	11-0186	Jumper, 4 Position
19	11-0187	Jumper, 2 Position
20	30-5847/01	Cover, Control Housing, with ON/OFF Switch
20a	30-5914/01	Cover, Control Housing, without ON/OFF Switch
21	04-0504	Screw, 8 - 18 x 0.375
22	52-2027	Probe, Ground

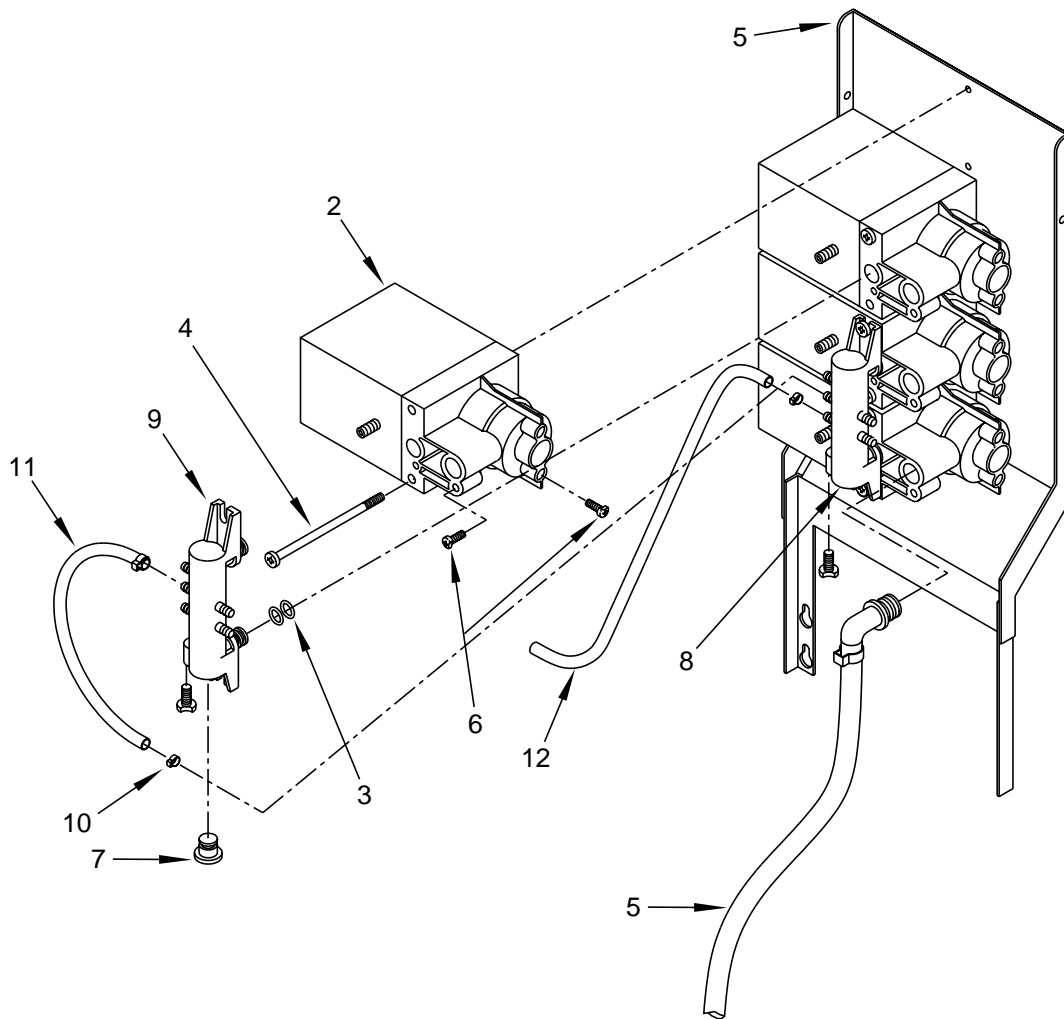
## 7.6 800CED - WATER REGULATOR ASSEMBLY

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
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-	18-0253/01	Regulator Assy, Water
1	05-0017	Washer, Seal, Flare, Nylon
2	49-0227	Hose, Regulator Assy
3	18-0252	Regulator
4	01-0446	Fitting, Barb
5	07-0481	Bracket, Regulator
6	04-0061	Screw, 8 - 18 x .375 AB
7	01-1429	Nut, 7/18-18, UNS
8	07-0438	Clamp, Oetiker



## 7.7 800CED - INTERNAL MINI-PUMP ASSEMBLY

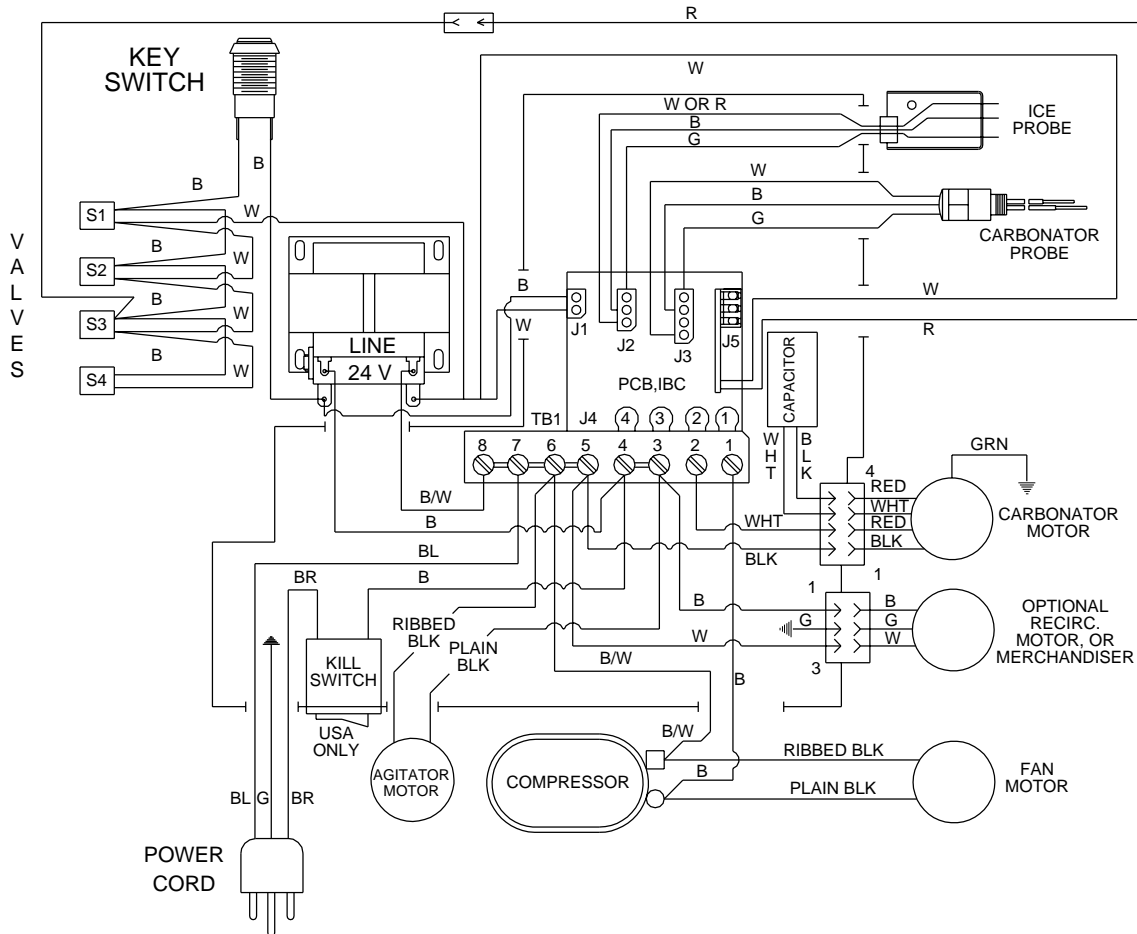


<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
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1	30-6655	Plate, Mini-Pump
2	82-0251	Pump-Assy, Mini
3	02-0005	O-Ring
4	04-0359	Screw, 8 - 32 x 3.100, PHD, PH, F, Z, CHR
5	49-0278	Tube Assy, Syrup, Out
6	04-0275	Screw, 8 - 16 x 0.427, THMD, PH, PLS
7	05-0604	Plug, CO <sub>2</sub> Manifold
8	54-0093	Manifold Assy, Natural
9	54-0092	Manifold Sub Assy, Gray
10	07-0441	Clamp, Oetiker, 9/32
11	08-0271	Tube, CO <sub>2</sub>
12	08-0272	Tube, CO <sub>2</sub> , Carbonator

## IMPORTANT

1. WHEN STARTING UNIT OR IF CURRENT IS INTERRUPTED THERE IS A FIVE (5) MINUTE DELAY BEFORE THE COMPRESSOR/FAN STARTS.
2. THERE IS A THREE (3) MINUTE PROTECTION TIMER ON THE CARBONATOR PUMP MOTOR. IF THE MOTOR HAS TIMED OUT, CHECK WATER SUPPLY AND RESET BY MOMENTARILY DISCONNECTING POWER.



SYM.	DESCRIPTION
	CHASSIS GROUND
	CONTROL BOX
	CHAMFER PIN 1
	OPTIONAL WATER BOOST PCB,IBC J5

*LANCER* LABEL,  
WIRING DIAGRAM, PN 06-1724