*Please refer to the Lancer web site (**www.lancercorp.com**) for information relating to Lancer Installation and Service Manuals, Instruction Sheets, Technical Bulletins, Service Bulletins, etc.*

INSTALLATION AND SERVICE MANUAL

LANCER SERIES 800

COUNTER ELECTRIC DISPENSER

100VAC/50-60HZ SERVICE

Manufactured for The Coca-Cola Company©

This Manual is an initial issue.

6655 LANCER BLVD. • SAN ANTONIO, TEXAS 78219 USA • (210) 310-7000

FAX SALES

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FAX ENGINEERING: • 210-310-7096

USA Patent Number: 5,499,744

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P.N. 28–0421

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SPECIFICATIONS

DIMENSION

Width	355.6 mm	(14 inches)
Depth	628.7 mm	(24 3/4 inches)
Height (without feet)	689.0 mm	(27 1/8 inches)

WEIGHT

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

CARBON DIOXIDE (CO_2) REQUIREMENTS

Minimum pressure of 70 PSIG (4.92 kg/cm^2, 4.83 BAR)

Maximum pressure of 80 PSIG (5.62 kg/cm^2, 5.52 BAR)

ICE BANK WEIGHT

6.8 to 7.7 kg (15 to 17 pounds)

DRINK CAPACITY

164 - 355 ml (12 ounce) drinks under 4.4^{o}C (40^{o}F) at two (2) drinks per minute with 23.9^{o}C (75^{o}F) ambient inlet water, and syrup.

DISPENSER INSTALLATION HIGHLIGHTS

Listed below are nine (9) 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 - 10 PSIG (0.70 kg/cm^2); Maximum - 70 PSIG (4.92 kg/cm^2).
7. CO_2 Pressure: Recommend nominal pressure 70 PSIG (4.92 kg/cm^2, 4.83 BAR). **Important:** Internal syrup pumps may not work at pressures less than 60 PSIG and the carbonator tank might overfill during plain water drink dispensing. CO_2 pressure over 80 PSIG may result in damage or leakage from the syrup pump system or may cause excessive foam in the drink.
8. Programmer connection to the Volumetric Valves should only be done with the valve power wire set connected to the non boost-pump position on the connector circuit board behind the water pump motor.
9. Valve Adjustment: Make sure drink temperature is below 4.4°C (40°F) before adjusting brix.

NOTES

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 113.6 kg (250 pounds).

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 203 mm [eight (8) inches] clearance must be maintained over the top of the unit and a minimum of 152 mm [six (6) inches] 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 18 mm feet.
B. When the dispenser is to be permanently bolted to the counter top, seal dispenser base to counter top with a silicone sealant which provides a smooth and easily cleanable bond to the counter.
C. For feet mounting, use the threaded mount feet that are packaged with this manual.

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 TWO PRONG PLUG WITH SEPARATE GROUND LEAD. FASTEN THE GROUND LEAD TERMINAL TO THE OUTLET PLATE CENTER SCREW OR OTHER VERIFIABLE GROUND.

CAUTION

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

A. 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

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.
C. Route through hole in counter and through opening behind splash plate and connect to the inlet water regulator using a flare seal washer (PN 05-0017). Use a back-up wrench to prevent damage to the regulator.
D. Leave 300 mm [12 inches] of extra tubing length below the counter for servicing and moving the dispenser.
E. Turn on water supply and check for leaks.

1.10 CONNECTING THE CO_2 SUPPLY

A. Connect high pressure CO_2 regulator assembly to CO_2 cylinder. Use a new CO_2 tank washer if regulator does not have built-in o-ring seal.
B. Place CO_2 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 300 mm (12 inches) of extra tubing length below the counter for servicing and moving the dispenser.

CAUTION

DO NOT TURN ON THE CO_2 SUPPLY AT THIS TIME.

G. Connect directly to the carbonator CO_2 inlet check valve.

1.11 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.

1.12 CONNECTING TO REMOTE PRESSURIZED SYRUP SUPPLY

A. Place the five (5) gallon (Figal) syrup containers and the CO_2 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 Figal syrup containers and attach them to the appropriate syrup flavor.
D. Attach a CO_2 supply line from each of the Figal syrup containers to the low pressure regulator and pressurize the containers.

1.13 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_2 regulator pressure adjusting screw all the way. Open the CO_2 cylinder handle slowly. Turn the CO_2 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_2 connections for leaks and repair if necessary.

NOTE

To check for CO_2 leaks, close the valve on the CO_2 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 has been accomplished.

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

1.14 VOLUMETRIC VALVE ADJUSTMENT

CAUTION:

WHEN USING THE HAND HELD PROGRAMMER, FIRST CONNECT VALVE POWER CONNECTION TO NON-BOOST POSITION ON THE VALVE CONNECTION CIRCUIT BOARD LOCATED BEHIND THE WATER PUMP MOTOR. THIS PRECAUTION PROTECTS ELECTRICAL RELAYS WITHIN THE DISPENSER'S CONTROL SYSTEM FROM POSSIBLE DAMAGE WHILE PROGRAMMING.

A. Valve Specifications

1. Finished Drink Flow Rates

88.7 ml/sec (3.0 ounces per second)
66.6 ml/sec (2.25 ounces per second)
44.4 ml/sec (1.5 ounces per second), as shipped

2. Flowing Pressure Requirements

	MINIMUM	MAXIMUM
Water	40 psig (2.8 kg/cm^2)	110 psig (7.7 kg/cm^2)
Syrup (Sugar)	20 psig (1.4 kg/cm^2)	70 psig (4.9 kg/cm^2)
Syrup (Diet)	10 psig (0.7 kg/cm^2)	70 psig (4.9 kg/cm^2)

3. Electrical Requirement

   24 VAC, 50/60Hz

B. Programmer Operating Procedures

1. Connecting
   a. Remove the ID panel from the front of the valve.
   b. Insert the programmer's 10-pin connector into the ID Panel plug on the front of the circuit board.
   c. When properly connected, the programmer will run a self diagnostic test. The display will show all "8"s with the decimal points lighted. After three (3) seconds, the display indicates the setting of the dip switches.
   d. If the programmer does not run its diagnostic test properly, disconnect it and try plugging it in again. If the programmer still fails, replace the programmer.

2. **Functions**

Read Memory:

Press this button to read and display the current settings programmed into the valve memory (i.e., S/W revision, ratio, and carb/non carb settings).

Read Dip Switches:

Press this button to read the dip switch settings (applies only to valves manufactured before July 1997).

NOTE

Dip switches were used on some field test valves (refer to 28-0301, 12/20/95).

Write Memory:

Press this button to write the programmer's displayed ratio and carbonation settings into the valve's memory.

Timed 5 Second Water:

Press this button to pour water for five (5) seconds. The programmer will display the ratio, the counts from the flowmeter, the flow rate in oz/sec, and the flow rate in ml/sec.

Timed 5 Second Pour:

Press this button to dispense a five (5) second pour of water and syrup for ratio testing. When complete, the programmer displays the ratio, carbonation settings, and total Flowmeter counts.

Syrup Purge:

Press and release to dispense a six (6) second syrup purge. Continue holding to purge syrup from system.

Ratio + (Plus):

Pressing this button will increase the ratio number on the display.

Hand Held Programmer
Figure 1

Ratio - (Minus):

Pressing this button will decrease the ratio number on the display.

Carb Toggle:

Pressing this button will toggle the carbonation setting from carbonated “C” to plain water “n” (non-carbonated).

Pour/Stop:

Press this button to manually pour a mixed drink. This button will also stop a timed pour.

Setting the Ratio/Carbonation

1. Connect the programmer to the Valve.
2. Press the “Read Mem” button.
3. Press the “Ratio +” or the “Ratio -” key until the desired ratio is displayed.
4. Verify the drink type. Press “Carb Toggle”to select “C” for carbonated or “n” for non-carbonated.
5. Press the “Enter” button to program the valve with the setting on the display
6. Verify Ratio by pressing “Read Mem”.
7. Disconnect the programmer.

1.15 PORTION CONTROL

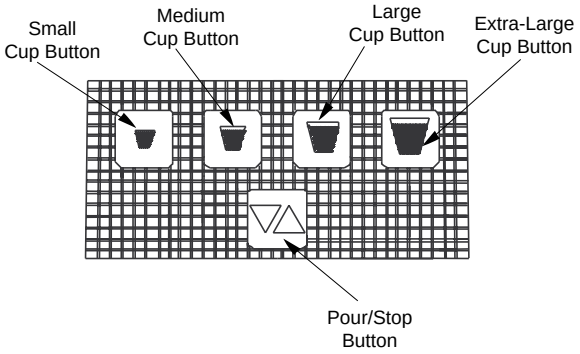
A. Programming Procedures

The following procedures describe the operation and programming of portion control ID panels for the Volumetric Valve.

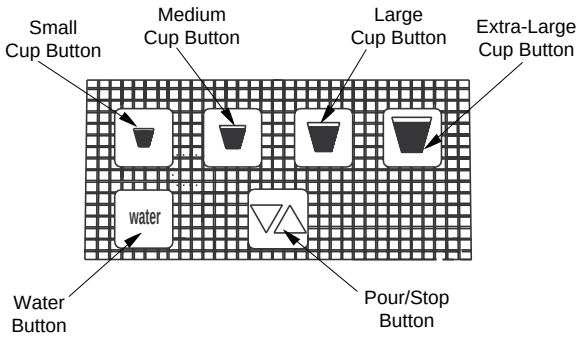
B. **Operation**

1. Cup buttons are Small, Medium, Large, Extra-Large.
2. Press and release the desired cup size. Valve will fill cup as programmed (see below).
3. **Pour/Cancel Button**
   a. Push and release to cancel or stop valve dispensing.
   b. Push and hold for continuous pour.
4. **Water Button**

   Push and hold for continuous water pour. Valve will dispense carbonated or non-carbonated water, depending on its location on the dispenser.



Portion Control, cup Buttons, Overlay
Figure 2



Portion Control, cup Buttons, Overlay with Water
Figure 3

C. **Teach and Learn Portion Control Programming**

In this mode, the valve “learns” the steps to fill each cup size, including the top off delay time. When activated, the valve dispenses the appropriate drink volume. Then, if a top off has been entered, it will pause for the programmed length of time. Finally, the valve will dispense the correct top off amount.

D. **Initial Install Procedure**

1. Simultaneously, press and hold the small cup button and the extra-large cup button switches on the portion control until the LED light in center of module starts blinking, then release switches. The blinking LED indicates that the set mode is active.
2. Put desired amount of ice in cup, place cup under valve and push selected size button (small, medium, large, or extra-large). Hold button in until cup fills to desired portion, then release button.
3. **Top off:** If a top off is not needed, go to Step 4. Wait for foam to settle, then actuate button again to top off.

NOTE

Only one (1) top off is allowed.

4. Repeat Steps 2 and 3 for other drink sizes. Go to Step 5 to exit program mode.
5. Press and release pour/stop button to return the portion control to the operational mode. Blinking LED light will go out.
6. Repeat Steps 1 through 5 for remaining valves.

E. **To Change Dispense Size**

Use procedures in the Initial Install Procedure discussed above; it is not necessary to reprogram every size.

F. **Calibrated Cup Portion Control Programming**

In this mode, the valve adds the volume from each programming step to the total drink size. When activated, the valve dispenses the total drink without pauses.

1. Simultaneously, press and hold the small and large buttons (see Figures 2 and 3) on the portion control until the LED light in the center starts blinking, then release switches.
2. Place volume cup under nozzle of valve to be calibrated.
3. Press appropriate size switch and fill volume cup to a point just short of the calibration mark on the volume cup. The LED will stay lighted constantly while programming an individual cup size.
4. Let foam settle, jog size switch until liquid reaches the calibration mark on the volume cup.
5. Press pour/stop button to end programming for selected cup size. LED will start blinking.
6. To program another cup size, repeat Steps 2 through 5, this section.
7. To exit the calibrated cup programming mode, press the pour/stop button when the Led is blinking. If the LED is lighted constantly, press the pour/stop button once to end the cup size program (LED starts blinking) and again to exit the program mode (LED off).

2. SCHEDULED MAINTENANCE

CAUTION

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

2.1 DISPENSER

A. DAILY

1. Remove the nozzle and diffuser from each valve. Clean as directed in the Nozzle and Diffuser Section.
2. Remove the cup rest and wash in warm soapy water.
3. Pour warm soapy water into the drip tray and wipe with a clean cloth.
4. With a clean cloth and warm soapy water, wipe off all exterior surfaces of the unit.
5. Reinstall the cup rest, valve diffusers and valve nozzles.

B. WEEKLY

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.

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.*

C. MONTHLY

1. Unplug the dispenser from it's power source.
2. Remove the nozzle and diffuser from each valve. Clean as directed in the Nozzle and Diffuser Section.
3. Remove the bonnet, and clean the dirt from the unit's condenser using a soft brush.
4. Reinstall the bonnet and plug in the unit.

D. EVERY SIX (6) MONTHS

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

E. YEARLY

1. Clean water bath interior, including evaporator coils and refrigeration components.
2. Clean the entire exterior of the unit.
3. Sanitize syrup lines.

2.2 VOLUMETRIC VALVE CLEANING AND SANITIZING PROCEDURES

A. Daily Nozzle/Diffuser Cleaning (See Figure 4)

Use the following procedures to clean the nozzle, and the diffuser assembly, each day:

1. Remove nozzle by twisting it counter-clockwise and pulling it down.
2. Pull the diffuser assembly down to remove it from the valve.
3. Wash the nozzle and diffuser with warm water.
4. If needed, apply 111 lubricant to the o-ring on the diffuser assembly. Then, carefully press it into the diffuser mounting area on the underside of the valve.
5. Make certain the nozzle o-ring, is in place around the nozzle mounting area on the valve. If necessary, slide a new nozzle o-ring onto the nozzle mounting area.
6. Install the nozzle by inserting it into the bottom plate and twisting it clockwise to lock it in place.

B. Monthly Nozzle/Diffuser Sanitizing

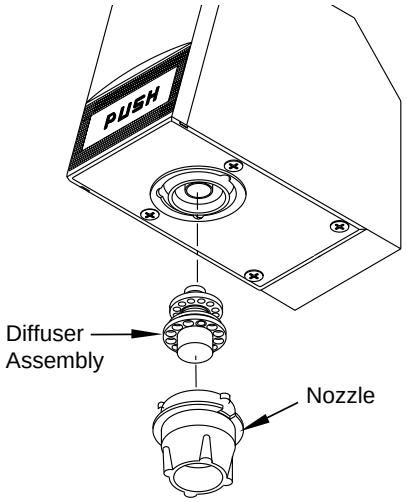
Use the following procedures to sanitize the nozzle, and the diffuser assembly, once a month.

1. Cleaning Solution

   Prepare a caustic-based (low sudsing, non-perfumed, and easily rinsed) detergent solution and clean, potable water at a temperature of 90° to 110°F. The cleaning solution should be 2% sodium hydroxide.

2. Sanitizing Solution

   Prepare a chlorine solution (less than pH 7.0) containing 50 PPM available chlorine with clean, potable water at a temperature of 90° to 110°F. Any sanitizing solution may be used as long as it is prepared in accordance with the manufacturer's written recommendations and safety guidelines, and provides 50 PPM available chlorine.



Nozzle/Diffuser
Figure 4

3. Cleaning Procedure

CAUTION

BE CAREFUL NOT TO GET SANITIZING SOLUTION ON THE CIRCUIT BOARD.

1. Disconnect power, so the valve will not be inadvertently activated while cleaning.
2. Remove nozzle by twisting it counter-clockwise and pulling it down.
3. Pull the diffuser assembly down to remove it from the valve.
4. Wash the nozzle and diffuser with the cleaning solution.
5. Immerse the nozzle and diffuser in a bath of the sanitizing solution for 15 minutes.
6. While the parts are in the sanitizing solution, visually inspect around the nozzle mounting area on the valve for syrup residue. Using a cloth or nozzle brush and warm water, clean this area.
7. Wipe off the dispensing lever and any other areas that may have been splashed by syrup.
8. Wearing sanitary gloves, remove, drain, and air dry the nozzle and diffuser.
9. Wearing sanitary gloves, carefully press the diffuser into the mounting area on the underside of the valve.
10. Make certain the nozzle o-ring, is in place around the nozzle mounting area on the valve. If necessary, slide a new nozzle o-ring onto the nozzle mounting area. (Wear sanitary gloves while handling the o-ring.)
11. Wearing sanitary gloves, install the nozzle by inserting it into the bottom plate and twisting it clockwise to lock it in place.
12. Connect power and replace cover. Valve is ready for operation.
13. Draw drinks to flush residual sanitizing solution. Taste the beverage to verify that there is no off taste. If an off taste is found, additional flushing may be required.

C. Valve and System Sanitizing

The complete valve and dispenser system must be sanitized during initial installation. Follow the manufacturer's instructions when scheduling and conducting dispenser sanitizing. The valve must be sanitized once every two weeks. The valve may remain on the dispensing tower during the sanitizing process.

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 two (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. TROUBLESHOOTING

TROUBLE	CAUSE	REMEDY
4.1 Water leakage around nozzle.	A. Damaged, missing, or improperly installed o-ring above nozzle.	A. If damaged, replace. If improperly installed, adjust.
4.2 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.
4.3 Water leakage - Valve.	A. Screw(s) loose. Water solenoid or flowmeter screws turn easily. B. Water leaks past o-ring, after screws have been tightened. C. Crack is visible in flowmeter body. D. Water leaks through nozzle. Debris in water solenoid. E. Water continues to leak after above items have been checked. Valve body broken.	A. Tighten screw(s). B. Replace o-ring. C. Replace flowmeter assembly. D. Remove debris from water solenoid. E. Replace valve.
4.4 Syrup leakage - Valve.	A. Screw(s) loose. Syrup body or syrup retainer screws turn easily. B. Water leaks past o-ring, after screws have been tightened.	A. Tighten screw(s) to 9 inch-pounds. B. Replace o-ring.

(Section 4.4 continued next page)

TROUBLE	CAUSE	REMEDY
(Section 4.4 continued from previous page)		
	C. Crack is visible in syrup body. D. Syrup leaks through nozzle. Debris in syrup solenoid. E. Syrup continues to leak after above items have been checked. Valve body broken.	C. Replace syrup body assembly. D. Remove debris from syrup solenoid. E. Replace valve.
4.5 Insufficient water flow.	A. Shutoff on mounting block not fully open. B. Foreign debris in water pump strainer. C. Insufficient incoming supply water pressure.	A. Open shutoff fully. B. Remove water pump strainer and clean. C. Verify incoming supply water pressure is a minimum of 10 PSI.
4.6 Insufficient syrup flow.	A. Insufficient CO_2 pressure to BIB pumps. B. Shutoff on mounting block not fully open.	A. Adjust CO_2 pressure to 80 PSI (minimum 70 PSI) for BIB pumps. B. Open shutoff fully.
4.7 Drink ratio incorrect (Weak or Strong) - Valve	A. Syrup restrictor incorrectly set. B. Water flow more than (see table just below). If installed, flow washer is installed correctly.	A. Check location of restrictor. The restrictor must be in and up for diet BIB applications. Restrictor must be down and out for non-diet drinks. Position restrictor correctly. B. Flow washer bad (if installed). Replace flow washer assembly, or install one if needed.

WATER FLOW MORE THAN:

Valve Specification	Maximum Water Flow Rate
88.7 ml/sec (3.0 ounces/second)	80.0 ml/sec (2.7 ounces/second)
66.6 ml/sec (2.25 ounces/second)	60.0 ml/sec (2.1 ounces/second)
44.4 ml/sec (1.5 ounces/second), as shipped	40.0 ml/sec (1.4 ounces/second)

	C. Insufficient syrup pressure. Run syrup purge test on hand held programmer. Output syrup should be approximately 3 ounces. D. Syrup may be obstructed. Incorrect ratio measurement after circuit board replaced. E. Flowmeter malfunctioning after all other items above have been checked.	C. Increase dispensing system syrup pressure. D. Disassemble syrup side and remove obstruction. E. Replace flowmeter assembly.
4.8 Valve pours erratically.	A. Incoming water and/or syrup supply not at minimum flowing pressure. B. Solenoid, flowmeter, and/or pushbutton connectors not completely plugged into circuit board. C. Pushbutton malfunctioning.	A. Check pressure and adjust. B. Insert connectors until locking tabs engage. C. Replace pushbutton.

(Section 4.8 continued next page)

TROUBLE	CAUSE	REMEDY
(Section 4.8 continued from previous page)		
	D. Circuit board covered with water or syrup and connectors are wet.	D. Unplug all connectors. Dry out and blow dry. Shake water out of plug. Reinsert connectors until locking tabs engage.
	E. Valve still pours erratically after pushbutton replaced and connectors have been dried and cleaned.	E. Replace malfunctioning circuit board.
	F. Hissing sound heard out of valve.	F. Air in lines. Continue to pour until lines are purged of air.
4.9 No product dispensed when valve activated.	A. Water and syrup shutoffs on mounting block closed or not fully open. Programmer lights up when plugged in.	A. Open shutoffs fully.
	B. The key switch is in the OFF position.	B. Turn key switch to ON position.
	C. Cup lever arm or ID panel actuator on valve is not actuating the switch.	C. Repair.
	D. Electricity not reaching valve.	D. Check electric current supplied to valve. Insure 24 volt supply is plugged in. If voltage is adequate, check solenoid coil and switch, and replace if necessary.
	E. Improper or inadequate water or syrup supply.	E. Remove valve from mounting block, open shutoffs slightly and check water and syrup supply. If no supply, check dispenser for freeze up or other problems.
	F. Transformer failure.	F. Reset transformer circuit breaker. If breaker pops again refer to Section 4.25.
	G. Pushbutton or portion control malfunctioning. Programmer can activate valve.	G. Replace ID panel.
	H. Programmer does not light up and 24 volt supply connected.	H. Circuit Board malfunctioning. Replace circuit board.
	I. “5 sec water” button on programmer dispenses small amount of syrup.	I. Soda and front syrup solenoid wires plugged into wrong connector. Connect soda and front syrup to correct connector.
	J. Programmer lights up, but does not dispense water with “5 sec water”. Shutoffs are open.	J. Water solenoid malfunctioning. Replace water solenoid.
	K. A new ratio cannot be entered by the programmer.	K. Circuit board malfunctioning. Replace circuit board.
	L. Circuit board misaligned. Lever not making contact with circuit board sensor.	L. Ensure circuit board is aligned and screw circuit board down all the way.
4.10 Water only dispensed; no syrup; or syrup only dispensed; no water.	A. Water or syrup shutoff on mounting block not fully open.	A. Open shutoff fully.
	B. Improper or inadequate water or syrup supply.	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.

(Section 4.10 continued next page)

TROUBLE	CAUSE	REMEDY
(Section 4.10 continued from previous page)		
	C. BIB supply too far from dispenser.	C. Check that BIB supply is within 1.83 meters [six (6) feet] of the dispenser.
	D. CO_2 pressure too low.	D. Check the CO_2 pressure to the pump manifold to ensure it is between 70-PSI.
	E. Stalled or inoperative BIB pump.	E. Check CO_2 pressure and/or replace pump.
	F. Kinked line.	F. Remove kink or replace line.
	G. Water only dispensed. Coils click when activated by programmer “syrup purge”.	G. Open syrup shutoff on mounting block.
	H. Out of syrup. “Syrup purge” draws no syrup and shutoff is open.	H. Replace BIB or figal.
	I. No clicking sound when “syrup purge” is activated.	I. Plug in syrup solenoid.
	J. Flow rate zero (0) after programmer “5 sec water” pour.	J. Flowmeter is unplugged. Plug in flowmeter.
	K. Flowmeter connector wet. Flow rate zero (0) after programmer “5 sec water” pour. Circuit board wet.	K. Unplug. Dry connector. Shake water out of plug. Reinsert connector.
	L. Programmer does not light up when plugged in. Circuit board malfunctioning.	L. Replace circuit board.
	M. Flowmeter rotor is obstructed, does not urn freely. Flow rate zero (0) after programmer “5 sec water” pour.	M. Remove obstruction or replace flowmeter.
	N. Flow rate zero (0) after programmer “5 sec water” pour. Flowmeter sensor bad.	N. Replace flowmeter assembly.
	O. No clicking sound when “syrup purge” is activated and coils are properly connected. Syrup solenoid bad.	O. Replace syrup solenoid.
	P. Coils click when “syrup purge” is activated, shutoff is open, and syrup supply is full.	P. Disassemble syrup side and remove obstruction.
4.11 No water just syrup. (Ice bank grew to water inlet line to carbonator tank.)	A. Low level.	A. Add water until it flows from overflow tube.
	B. Unit not level.	B. Level unit and add water.
	C. Syrup in water bath.	C. Melt ice bank and remove all water. Refill. Locate possible syrup leak area and repair.
	D. Water cage is out of position.	D. Reposition water cage.
	E. PCB relay sticking.	E. Check continuity of compressor relay. Compressor should time-out in five (5) minutes.
	F. Refrigerant leak.	F. Find leak and recharge unit. (If unit is not frozen.)
	G. Check water supply.	G. Turn on water and shut unit OFF, then ON, to reset carbonator.
	H. Carbonator timed out.	H. Turn unit OFF then ON to reset carbonator.
	I. PCB malfunctioning.	I. Replace PCB.

TROUBLE	CAUSE	REMEDY
4.12 Valve will not shut off.	A. Cup lever may be damaged, sticking, or binding. Top end of lever arm does not return to back of valve.	A. Correct or replace lever arm, and/or lever spring.
	B. Switch not actuating freely.	B. Check switch for free actuation.
	C. Valve stops when panel is unplugged from circuit board. pushbutton/portion control malfunctioning.	C. Replace panel.
	D. Valve pours with lever arm retracted, or pushbutton or portion control is unplugged.	D. Circuit board malfunctioning. Replace circuit board.
	E. Circuit board covered with water or syrup. Moisture in plug (pushbutton, programmer) on front of circuit board.	E. Unplug. Dry out connector. Shake water out of plug. Reinstall when dry.
4.13 Syrup only dispensed. No water, but CO_2 gas dispensed with syrup. (Valve cycles on and off quickly.)	A. Improper water flow to dispenser.	A. Check for water flow to dispenser (see Section 4.5).
	B. Carbonator pump motor has timed out.	B. Reset by turning the unit OFF and and then ON by using the ON/OFF switch on top of the unit or unplugging unit momentarily.
	C. Liquid level probe not connected properly to PCB.	C. Check connections of liquid level probe to PCB assembly.
	D. Faulty PCB assembly.	D. Replace PCB assembly.
	E. Faulty liquid level probe.	E. Replace liquid level probe.
	F. Water bath frozen.	F. Thaw water bath and repair faulty component. (See refrigeration related symptoms.)
	G. Water line frozen.	G. Refer to Section 4.16.
4.14 Excessive foaming.	A. Incoming water or syrup temperature too high.	A. Correct prior to dispenser. Consider larger dispenser or pre-cooler.
	B. CO_2 pressure too high.	B. Adjust CO_2 pressure downward, but not less than 70 PSI.
	C. Nozzle and diffuser not properly installed.	D. Remove and reinstall properly.
	D. Nozzle and diffuser not clean.	D. Remove and clean.
	E. Air in BIB lines.	E. Bleed air from BIB lines.
	F. Poor quality ice.	F. Check quality of ice used in drink.
	G. High beverage temperature.	G. Check refrigeration system.
	H. Diet restrictor setting incorrect.	H. Restrictor must be set “up and in” for diet BIB drinks. For all other drinks, restrictor must be set “out and sideways”. Set correctly.
	I. Hissing sound heard from valve. Air is in system.	I. Continue to pour until air is purged from lines.
	J. Water flow rate greater than 2.7 oz/sec.	J. Replace flow washer assembly, or install flow washer assembly (if not previously installed).
4.15 Water continually overflows from water bath into drip tray.	A. Loose water connection(s).	A. Tighten water connections.
	B. Flare seal washer leaks.	B. Replace flare seal washer.
	C. Faulty water coil.	C. Replace water coil.

TROUBLE	CAUSE	REMEDY
4.16 Compressor starts and continues to run until freeze up and will not cut off.	A. PCB malfunctioning or faulty ice bank probe.	A. Disconnect ice band probe from PCB. 1. If compressor continues to run, replace PCB. 2. If compressor stops, replace ice bank probe.
	B. Ice bank probe positioned improperly.	B. Check positioning of ice bank probe, and replace if needed.
	C. Ice bank probe shorted to ground.	C. Replace ice bank probe.
NOTE: 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.		
4.17 Warm drinks.	A. Restricted airflow.	A. Check clearances around sides, top, and inlet of unit. Remove objects blocking airflow through grill.
	B. Dispenser connected to hot water supply.	B. Switch to cold water supply.
	C. Refrigeration system not running.	C. Refer to Sections 4.18 - 4.22.
	D. Refrigerant leak.	D. Repair and recharge.
	E. Condenser fan motor not working.	E. Replace condenser fan motor.
	F. Dirty condenser.	F. Clean condenser.
	G. Dispenser capacity exceeded.	G. Add pre-cooler or replace with larger dispenser.
4.18 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.	A. Allow for five (5) minute delay to lapse.
	B. Ice bank probe not completely submerged.	B. Fill water reservoir until water flows from overflow tube.
	C. Circuit breaker or fuse tripped.	C. Reset breaker or replace fuse. If problem persists: 1. Determine reason and correct. 2. Electrical circuit overloaded; switch to another circuit.
	D. Inadequate voltage.	D. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage.
	E. PCB malfunctioning.	E. Replace PCB assembly.
	F. Incorrect wiring.	F. Refer to wiring diagram and correct.
	G. Faulty ice bank probe.	G. Replace ice bank probe.
	H. Transformer failure.	H. Reset transformer circuit breaker. If breaker pops again, refer to Section 4.27.
	I. Ice bank probe not connected properly to PCB.	I. Connect ice bank probe to PCB.
4.19 Compressor does not start (no hum), but condenser fan motor runs.	A. Compressor relay or overload malfunctioning.	A. Replace compressor relay or overload.
	B. Inadequate voltage.	B. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage.
	C. Incorrect wiring.	C. Refer to wiring diagram and correct.
	D. Compressor malfunctioning.	D. Replace compressor.
4.20 Compressor does not start but hums.	A. Inadequate voltage.	A. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage.

(Section 4.20 continued next page)

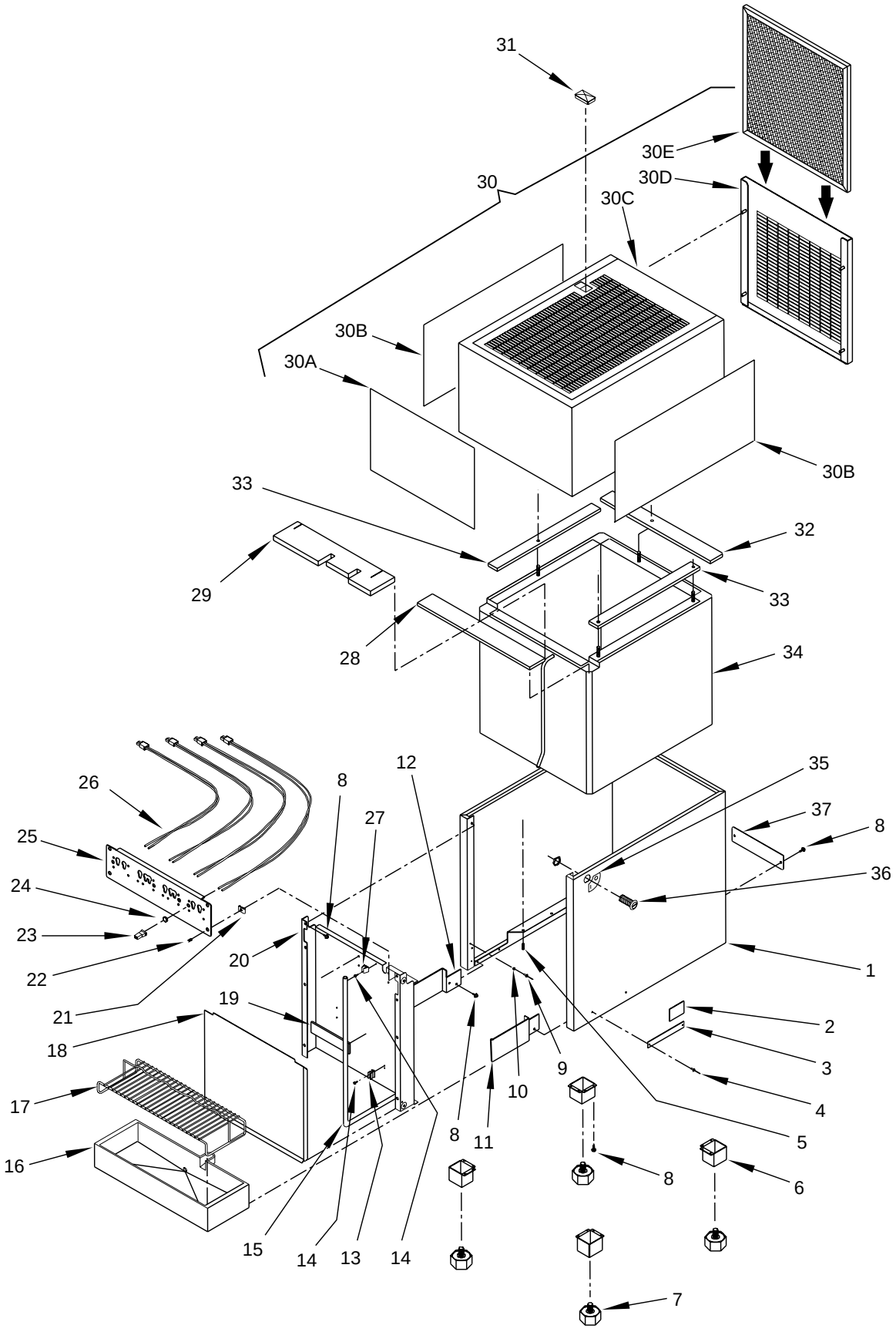
TROUBLE	CAUSE	REMEDY
(Section 4.20 continued from previous page)		
	B. Incorrect wiring. C. Starting relay malfunctioning. D. Compressor malfunctioning.	B. Refer to wiring diagram and correct. C. Replace starting relay. Be sure to use correct relay. Failure to use correct relay will cause compressor failure. D. Replace compressor or deck.
4.21 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.
4.22 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.
4.23 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 refrigerant charge/ slow refrigerant 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.
4.24 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.
4.25 Circuit breaker popping.	A. Valve wire harness shorted to itself or to faucet plate. B. PCB is bad. C. Secondary wire harness is bad. D. Transformer failure.	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. 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. C. If it does not pop, locate short in secondary harness between transformer, PCB and valve wire harness. D. Detect short by disconnecting both transformer fastons and restore power. If breaker does pop, replace transformer.

TROUBLE	CAUSE	REMEDY
4.26 BIB pump does not operate when dispensing valve is opened.	A. Out of CO_2, CO_2 not turned on, or low CO_2 pressure. B. Out of syrup. C. BIB connector not tight. D. Kinks in syrup or gas lines.	A. Replace CO_2 supply, turn on CO_2 supply, or adjust CO_2 pressure to 70-80 PSI. B. Replace syrup supply. C. Fasten connector tightly. D. Straighten or replace lines.
4.27 BIB pump operated but no flow.	A. Leak in syrup inlet or outlet line. B. Defective BIB pump check valve.	A. Replace line. B. Replace BIB pump.
4.28 BIB pump continues to operate when bag is empty.	A. Leak in suction line. B. Leaking o-ring on pump inlet fitting.	A. Replace line. B. Replace o-ring.
4.29 BIB pump fails to restart after bag replacement.	A. BIB connector not on tight. B. BIB connector is stopped up. C. Kinks in syrup line.	A. Tighten BIB connector. B. Clean out or replace BIB connector. C. Straighten or replace line.
4.30 BIB pump fails to stop when dispensing valve is closed.	A. Leak in discharge line or fittings. B. Empty BIB. C. Air leak on inlet line or bag connector.	A. Repair or replace discharge line. B. Replace BIB. C. Repair or replace.
4.31 No product out light.	A. Burned-out lamp. B. Faulty wiring or pressure switch in product line.	A. Replace lamp. B. Repair or replace.
4.32 Low or no carbonation.	A. Low or no CO_2. B. Excessive water pressure. C. Worn or defective carbonator pump.	A. Check CO_2 supply. Adjust CO_2 pressure to 70 PSI. B. Water regulator should be set at 50 PSI. C. Replace carbonator pump.

NOTES

5. ILLUSTRATIONS, PARTS LISTINGS, AND WIRING DIAGRAMS

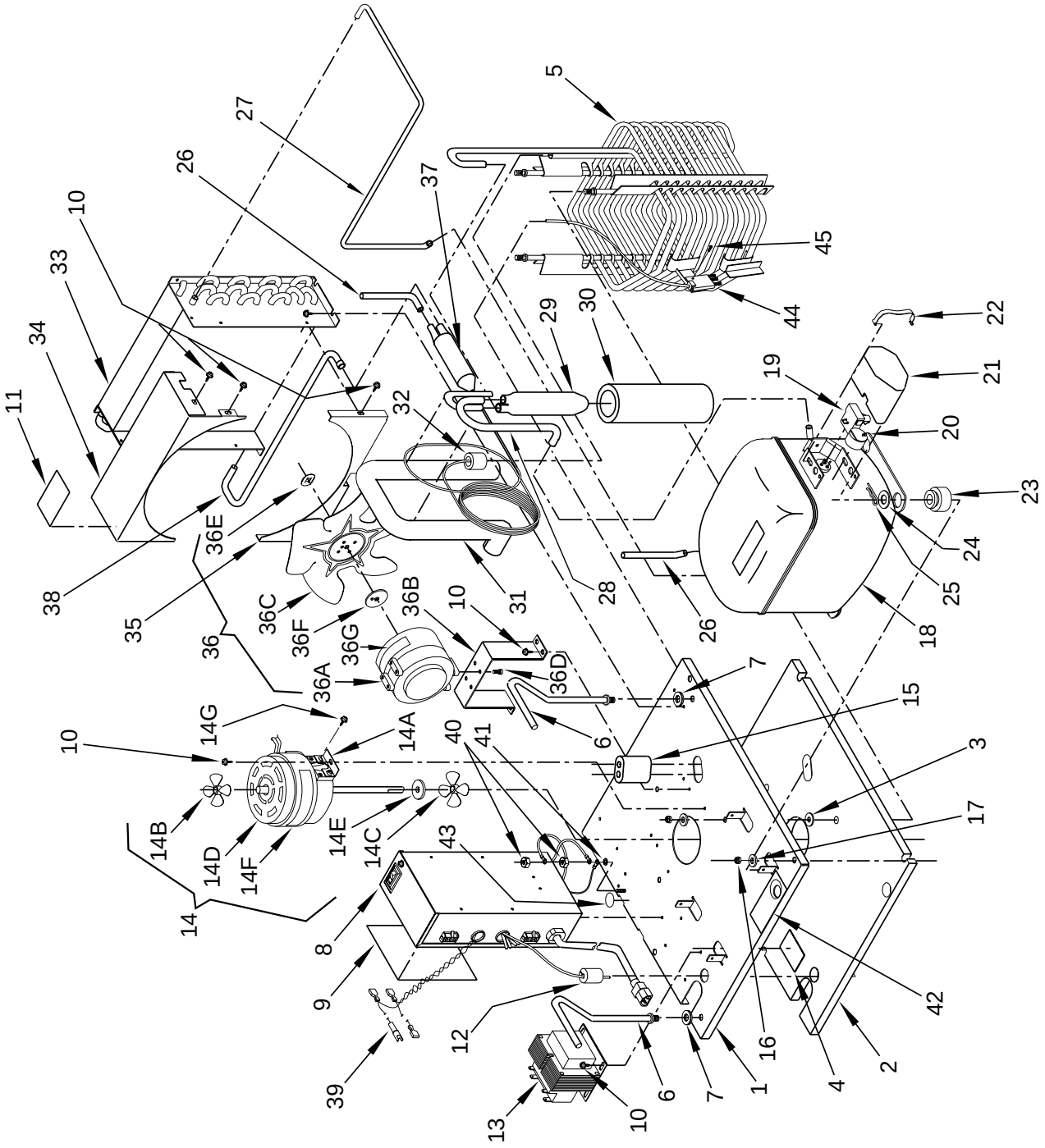
5.1 800 CED - CABINET ASSEMBLY



5.1 800 CED - CABINET ASSEMBLY (CONTINUED)

ITEM	PART NO.	DESCRIPTION
-	82-2634	Cabinet Assy, 800 CED
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	51-0494/01	Leg Bracket Assy
7	05-1280	Leg
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	23-1164	Cup Rest, Short
-	23-1163	Cup Rest, Tall
18	30-6883	Splash Plate
19	06-0851	Label, Overflow
20	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	30-7503	Faucet Plate, 4 Valve, 3 Way
26	52-2155	Harness Assy
27	03-0036	Clip, Retaining
28	50-0256	Insulation, Front
29	50-0258	Insulation, Comb
30	82-2709	Bonnet Assy with Graphics and Filter (Contact Customer Service)
30A	REF	Graphic, Front (Contact Customer Service)
30B	REF	Graphic, Side (Contact Customer Service)
30C	23-1145	Bonnet Assy, Extended, Red, 800
30D	30-7544	Bracket, Filter
30E	81-0495	Filter
31	05-0786	Plug, Bonnet
32	50-0260	Insulation, Back
33	50-0255	Insulation, Side
34	82-2258	Tank Assy, Foamed
35	06-0881	Label, Key Switch
36	12-0097	Key Switch
37	07-0490	Cover Plate

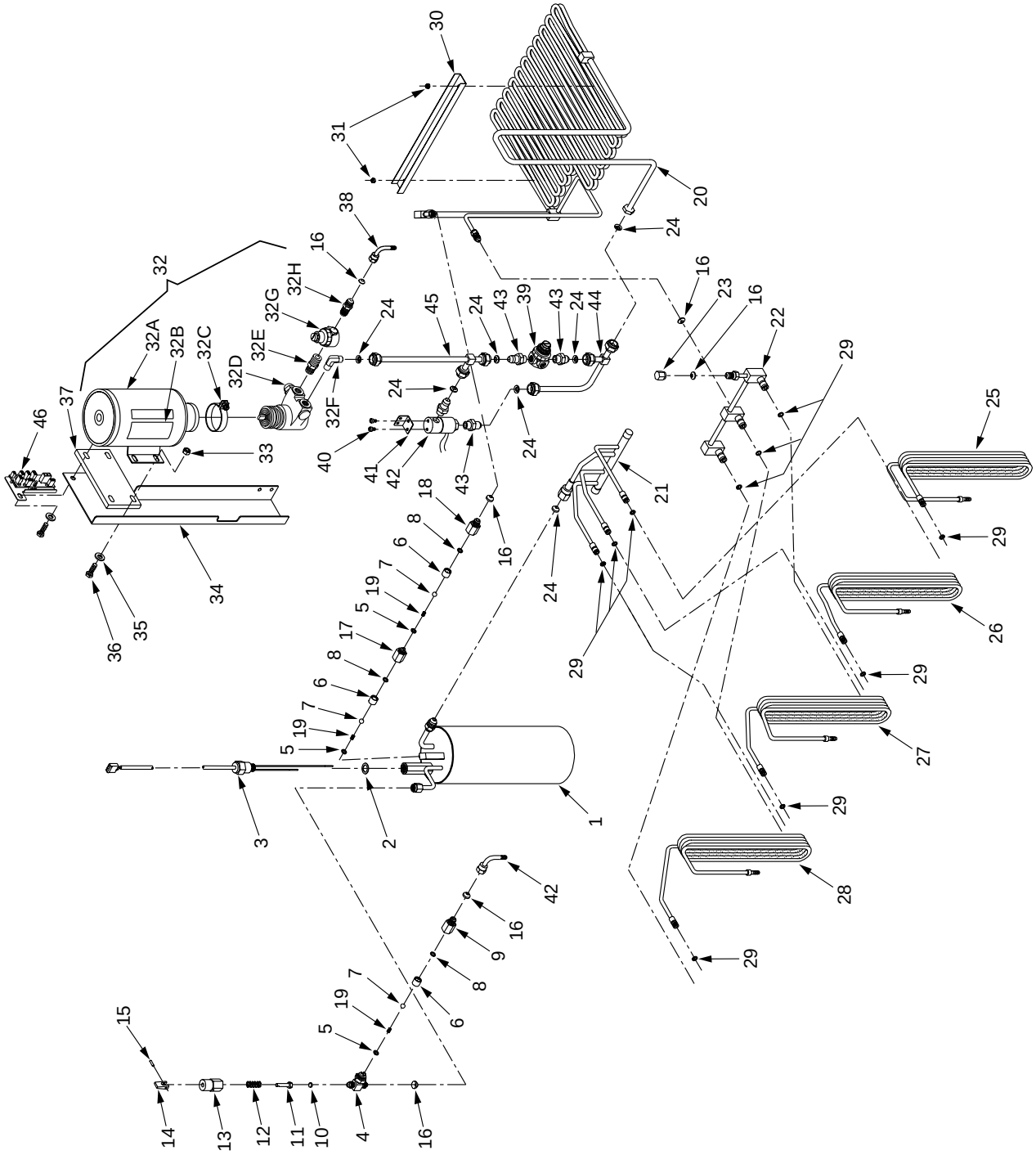
5.2 800 CED - REFRIGERATION DECK ASSEMBLY



5.2 800 CED - REFRIGERATION DECK ASSEMBLY (CONTINUED)

ITEM	PART NO.	DESCRIPTION
-	82-2692	Deck Assy, Refrig.,R-134a, 100V/50-60Hz
1	51-5562/01	Sub Assy, Compressor Deck
2	50-0257/01	Insulation, Compressor Deck
3	04-0063	Washer, Flat
4	89-0014	Cover, Hole
5	23-0956/03	Evaporator Coil Assy
6	51-0068	Handle
7	04-0574	Washer
8	52-2174	Control Housing Assy
-	26-0374	Capacitor
9	06-2114	Label, Wiring Diagram
10	04-0504	Screw, 8 - 18 x 0.375
11	06-0080-01	Label, Nameplate
12	02-0041	Seal
13	25-0066	Transformer, 100V/50-60Hz
14	52-2160	Motor Assy, Agitator, 100V/50-60Hz
14A	30-5113/01	Bracket, Agitator
14B	05-0495/01	Propeller, 2.062 DIA
14C	05-0502	Propeller, 2.250 DIA
14D	91-0128	Motor, Agitator, 25W, 100V/50-60Hz
14E	02-0032	Washer
14F	06-2113	Label, 100V/50-60Hz, 25W
14G	04-0059	Screw
15	02-0040	Seal, Extrusion
16	04-0032	Nut, Nylok, 1/4 - 20
17	04-0033	Washer, Flat (0.281 ID)
18	88-0053	Compressor, R-134a, 100V/50-60Hz
19	12-0341	Relay, R-134a, 100V/50-60Hz
20	12-0342	Overload, R-134a, 100V/50-60Hz
21	13-0006	Cover, Terminal
22	03-0040	Bale Strap
23	02-0114	Grommet
24	04-0537	Washer, Flat (0.467 ID)
25	03-0150	Retainer, Clip
26	47-0344	Tube, Process
27	47-1233/01	Tube, Compressor (Hi Side)
28	47-1718	Tube, Return (Lo Side)
29	51-0061	Accumulator
30	50-0211	Boot
31	50-0205	Insulation, Tube
32	50-0159	Insulation, Tube
33	23-0985	Condenser, R-134a
34	30-5881	Shroud, Fan, Top
35	30-5882	Shroud, Fan, Bottom
36	52-2184	Motor Assy, Fan, 9W, 100V/50-60Hz
36A	91-0066	Motor, Fan, 100V/50-60Hz
36B	30-5835/01	Bracket, Fan Motor
36C	07-0354	Blade, Fan
36D	04-0059	Screw
36E	04-0060	Nut
36F	02-0034	Silencer
36G	06-2112	Label, 100V/50-60Hz, 9W
37	23-0932	Dryer Cap Assy, R-134a
38	47-1285	Tube, Condenser, Out
39	52-2154	Harness Assy, Transformer, Secondary
40	04-0110	Nut, 8 - 32
41	04-0576	Washer, Int., Tooth
42	06-0856/01	Label, Fill Hole
43	06-0877	Label, Ground
44	52-1773	Probe Assy, IBC
45	04-0470	Screw

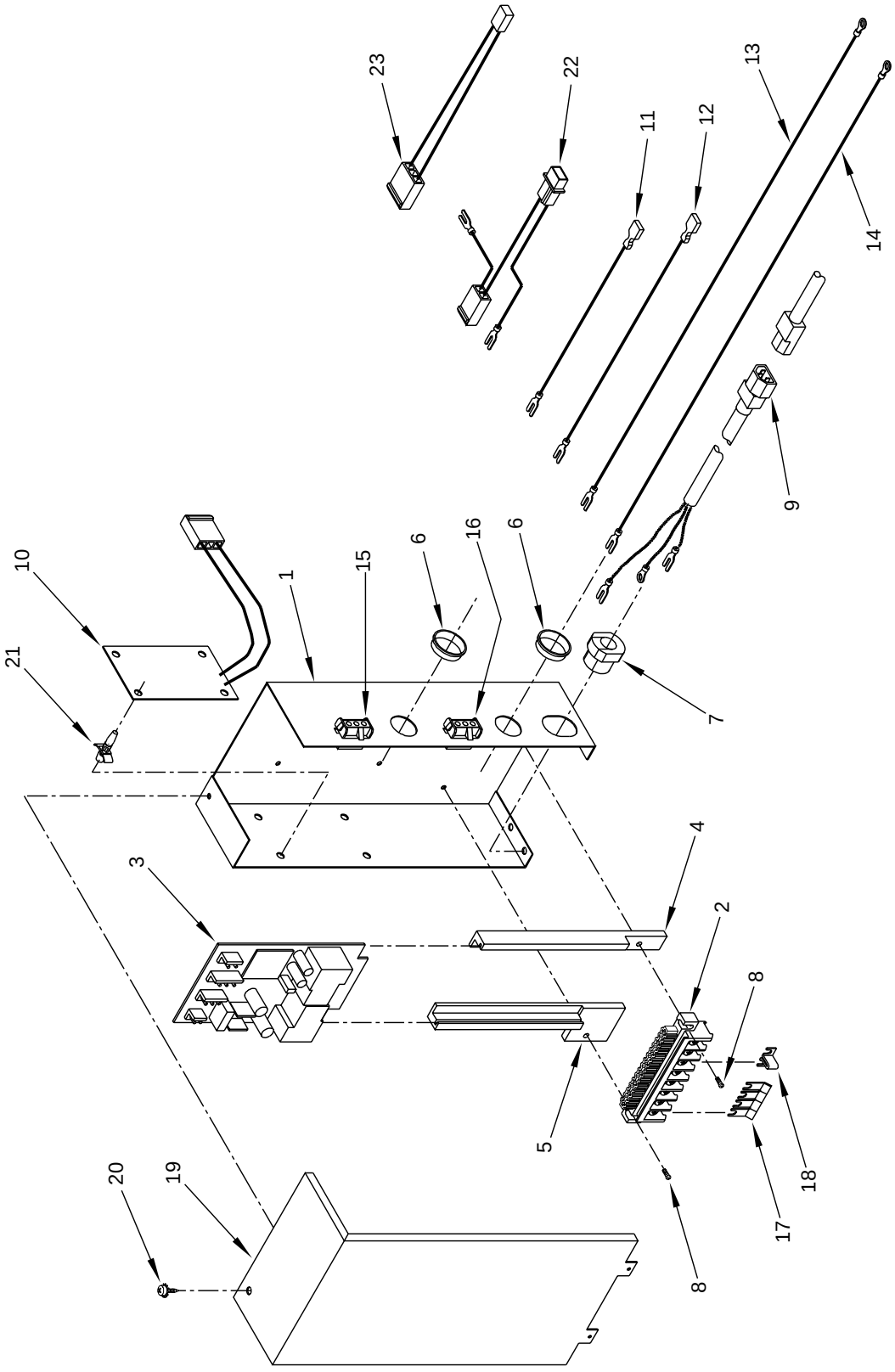
5.3 800CED - CARBONATOR/WATER/SYRUP LINE ASSEMBLIES



5.3 800 CED - CARBONATOR/WATER/SYRUP LINE ASSEMBLIES (CONTINUED)

ITEM	PART NO.	DESCRIPTION
-	82-2258	Carbonator Assy, EIBC
1	23-1245	Tank Assy, Carbonator
2	02-0096	Washer, Plastic
3	52-0909	Probe Assy
-	17-0469	Fitting Assy, CO_2 IN
4	01-1311	Fitting Sub Assy, CO_2
5	02-0003	O-Ring
6	01-0689	Sleeve
7	01-0674	Ball
8	02-0025	O-Ring
9	01-0669	Body, Check Valve, Flare
-	54-0066	Relief Valve Assy
10	02-0023	Seat
11	05-0536	Stem
12	03-0024/02	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	48-1436	Water Line Assy
21	48-1443	Manifold Assy, Soda
22	48-1484	Manifold Assy, Plain Water
23	01-0204	Cap
24	05-0017	Flare Seal Washer, Large
25	48-1432	Tube Assy, Syrup No. 1
26	48-1433	Tube Assy, Syrup No. 2
27	48-1434	Tube Assy, Syrup No. 3
28	48-1435	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
32	82-2693	Pump Assy, 100V/50-60Hz (includes items 32 -36, 43, 50, and 51)
32A	91-0126	Motor, Pump, 100V/50-60Hz
32B	06-2110	Label, 100V/50-60-Hz, 1/5 HP
32C	07-0017	Clamp
32D	86-0097	Pump Assy
32E	01-1946	Fitting, Straight
32F	01-0987	Fitting, Elbow
32G	18-0252	Regulator
32H	01-0109	Fitting, 1/4” MPT x 3/8” Flare
33	04-0032	Nut, Lock,1/4 - 20, SS
34	30-6656	Bracket, Pump
35	04-0033	Washer, 1/4 x 0.065 THK
36	04-0520	Bolt, 1/4 - 20 x 0.500
37	50-0309	Insulation, Carb Bracket
38	01-0434	Fitting, Elbow, 3/8"
39	18-0252	Regulator
40	04-0320	Screw
41	30-6179/02	Bracket, Solenoid
42	52-1794	Solenoid Assy
43	01-0109	Fitting, 1/4” MPT x 3/8” Flare
44	48-1437	Tube Assy, Regulator/Solenoid
45	48-1438	Tube Assy, Regulator/Pump
46	82-2696	PCB, Valve Connector, with Bracket

5.4 800CED - CONTROL HOUSING ASSEMBLY



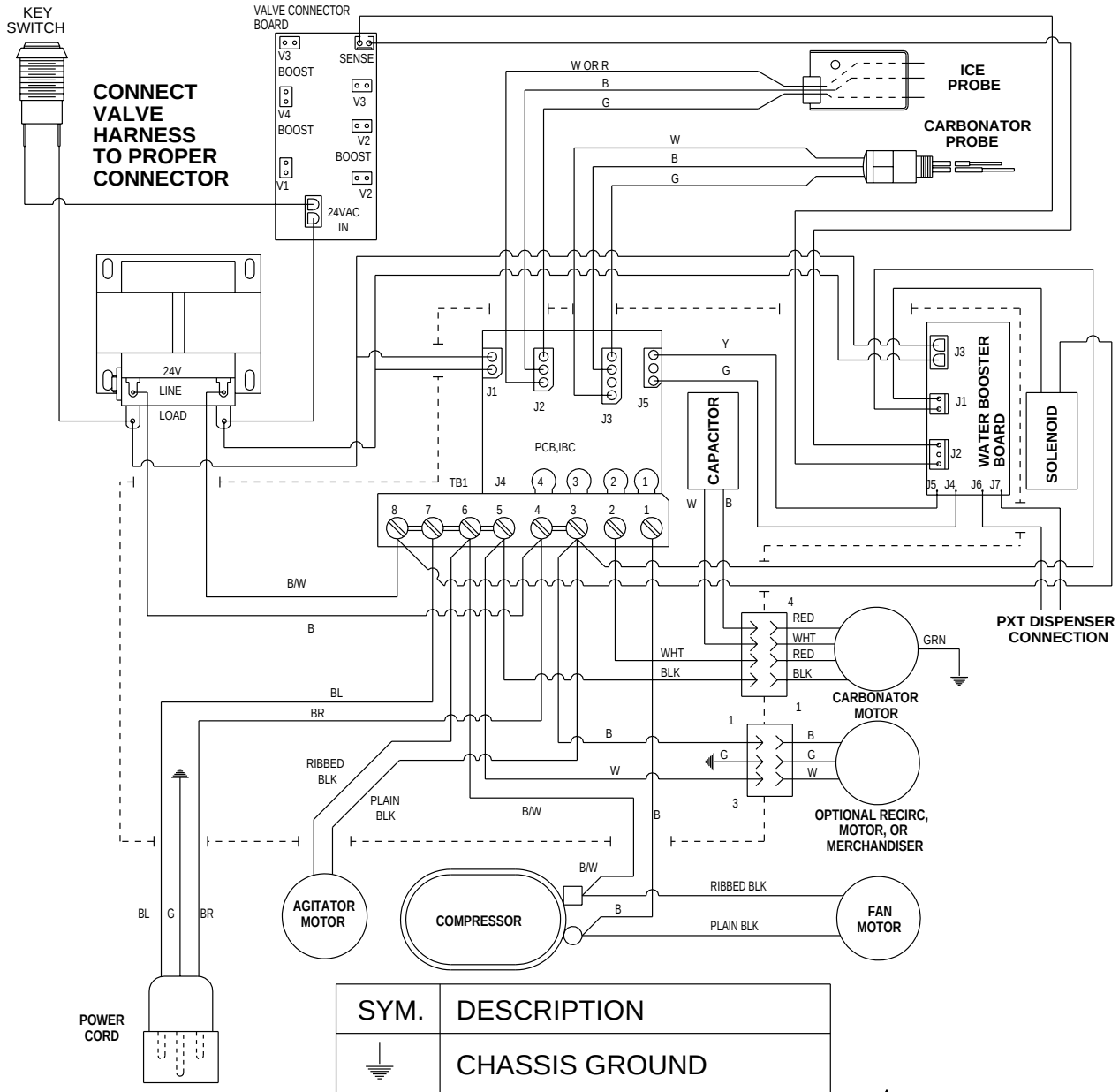
5.4 800 CED - CONTROL HOUSING ASSEMBLY (CONTINUED)

ITEM	PART NO.	DESCRIPTION
-	52-2174	Control Housing
1	30-7203/01	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	52-2186	Power Cord Assy
10	52-1767/01	PCB Assy, Water Boost
11	52-0904	Lead Assy, Trans., Primary, #1
12	52-0905	Lead Assy, Trans., Primary, #2
13	52-0906	Lead Assy, Compressor, #1
14	52-0907	Lead Assy, Compressor, #2
15	52-0908	Harness Assy, Carbonator
16	52-1210	Harness Assy, Recirc.
17	11-0186	Jumper, 4 Position
18	11-0187	Jumper, 2 Position
19	30-5914/01	Cover, Control Housing, without ON/OFF Switch
20	04-0504	Screw, 8 - 18 x 0.375
21	05-1535	Support, PCB
22	52-2156	Harness Assy, Solenoid
23	52-2157	Harness Assy, Sense

5.5 800 CED - WIRING DIAGRAM

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

800 CED
- W/ WATER BOOSTER PCB

LANCER **LABEL, WIRING DIAGRAM 06-2114**