

# LANCER®

## Sensation 44



## Operation Manual

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Lancer PN: 28-0983

Revision: 01-1 April 2019

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## ABOUT THIS MANUAL

This booklet is an integral and essential part of the product. Please carefully read the guidelines and warnings contained herein as they are intended to provide the user with essential information for the continued safe use and maintenance of the product. In addition, it provides **GUIDANCE ONLY** to the user on the correct services and site location of the unit.

***The installation and relocation, if necessary, of this product must be carried out by qualified personnel with up-to-date safety and hygiene knowledge and practical experience, in accordance with current regulations.***

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## BEFORE GETTING STARTED

Each unit is tested under operating conditions and is thoroughly inspected before shipment. At the time of shipment, the carrier accepts responsibility for the unit. Upon receiving the unit, carefully inspect the carton for visible damage. If damage exists, have the carrier note the damage on the freight bill and file a claim with carrier. Responsibility for damage to the dispenser lies with the carrier.

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## READ ALL SAFETY INSTRUCTIONS BEFORE USING THIS UNIT.

This manual contains important safety information and all applicable safety precautions must be observed. To reduce the risk of fire, electric shock, damage to the equipment or personal injury when using this unit all instructions/warnings on the product being used must be followed:

### ⚠ WARNING

Text following the Warning signal indicates a hazardous situation, which if not avoided, will result in death or serious injury. Be sure to read all Warning statements before proceeding with the installation.

### ⚠ CAUTION

Text following the Caution signal indicates a hazardous situation, which if not avoided, could result in death or serious injury. Be sure to read the Caution statements before proceeding with the installation.

### ⚠ ATTENTION

Text following the Attention signal addresses a situation that if not followed could potentially damage the equipment. Be sure to read the Attention statements before proceeding.

### NOTE

Text following the Note signal provides you with information that may help you more effectively perform the installation procedures within this manual. Disregarding information will not cause damage or injury, however it may limit the performance of the dispenser.

# IMPORTANT SAFETY INSTRUCTIONS

## Intended Use

- The dispenser is for indoor use only
- This appliance is intended to be used in commercial applications such as restaurants or similar.
- This appliance should not be used by children or infirm persons without supervision.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Cleaning and user maintenance shall not be performed by children without supervision.
- This unit is not a toy and children should be advised not to play with the appliance.
- The min/max ambient operating temperature for the dispenser is 40°F to 105°F (4°C to 41°C).
- Do not operate unit below minimum ambient operation conditions.
- Should freezing occur, cease operation of the unit and contact authorized service technician.
- The maximum tilt for safe operation is 5°.
- This appliance must be installed and serviced by a professional.

## Carbon Dioxide (CO<sub>2</sub>)

- **WARNING:** Carbon Dioxide (CO<sub>2</sub>) is a colorless, noncombustible gas with a light pungent odor. High percentages of CO<sub>2</sub> may displace oxygen in the blood.
- **WARNING:** Prolonged exposure to CO<sub>2</sub> can be harmful. Personnel exposed to high concentrations of CO<sub>2</sub> gas will experience tremors which are followed by a loss of consciousness and suffocation.
- **WARNING:** If a CO<sub>2</sub> gas leak is suspected, immediately ventilate the contaminated area before attempting to repair the leak.
- **WARNING:** Strict attention must be observed in the prevention of CO<sub>2</sub> gas leaks in the entire CO<sub>2</sub> and soft drink system.

## Power

- Follow all local electrical codes when making connections.
- Check the dispenser name plate label, located behind the splash plate, for the correct electrical requirements of unit. **DO NOT** plug into a wall electrical outlet unless the current shown on the serial number plate agrees with local current available.
- Each dispenser must have a separate electrical circuit.
- **DO NOT** use extension cords with this unit.
- **DO NOT** 'gang' together with other electrical devices on the same outlet.
- **WARNING:** Always disconnect electrical power to the unit to prevent personal injury before attempting any internal maintenance.
- The resettable breaker switch should not be used as a substitute for unplugging the dispenser from the power source to service the unit.
- Only qualified personnel should service internal components of electrical control housing.
- **WARNING:** Make sure that all water lines are tight and units are dry before making any electrical connections
- 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.

## Water Notice

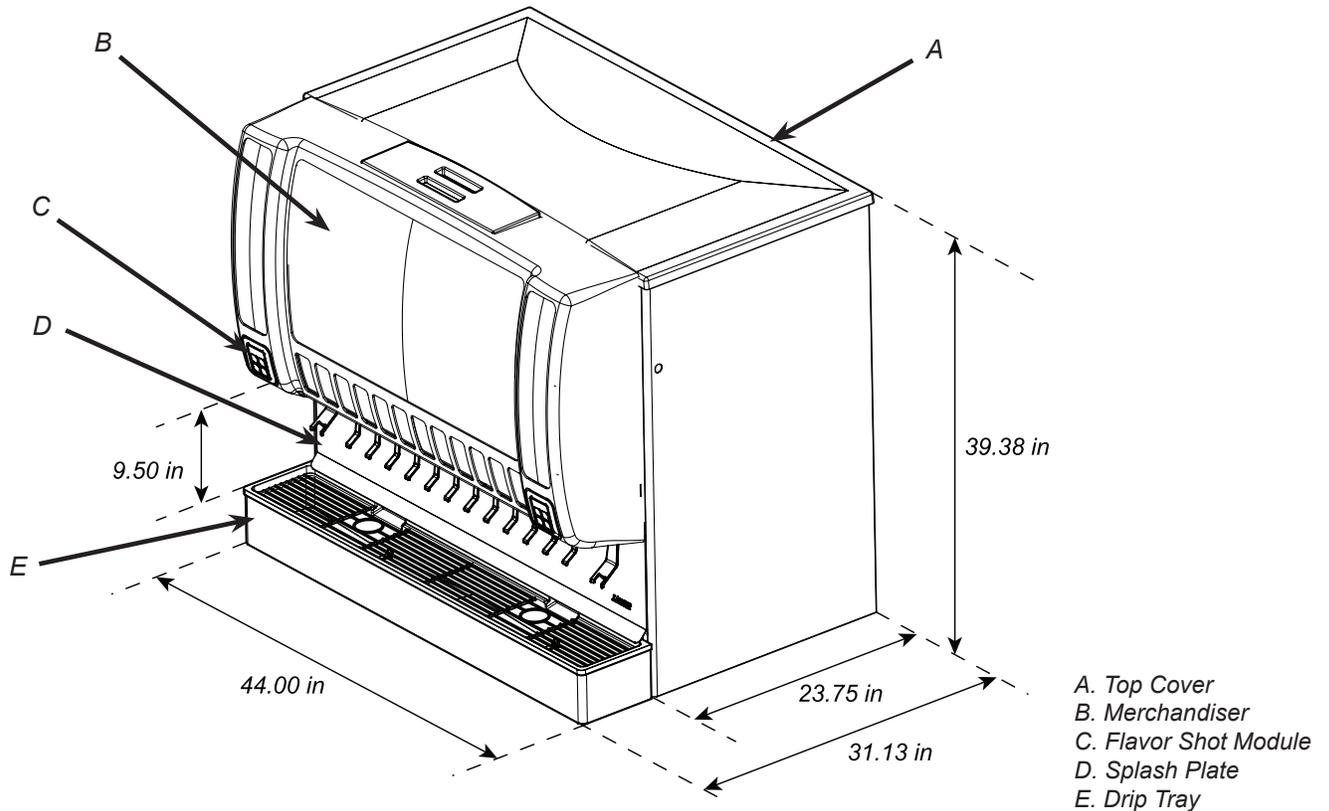
- Provide an adequate, potable water supply. Water pipe connections and fixtures directly connected to a potable water supply must be sized, installed, and maintained according to federal, state, and local codes.
- The water supply line must be at least a 3/8 inches (9.525 mm) pipe with a minimum of 75 psi (0.516 MPa) line pressure, but not exceeding a maximum of 125 psi (0.862 MPa). Water pressure exceeding 125 psi (0.862 MPa) must be reduced to 125 psi (0.862 MPa).
- Use a filter in the water line to avoid equipment damage and beverage off-taste. Check the water filter periodically, as required by local conditions.
- **CAUTION:** The water supply must be protected by means of an air gap, a back flow prevention device (located upstream of the CO<sub>2</sub> injection system) or another approved method to comply with NSF standards. A leaking inlet water check valve will allow carbonated water to flow back through the pump when it is shut off and contaminate the water supply.
- **CAUTION:** Ensure the back flow prevention device complies with ASSE and local standards. It is the responsibility of the installer to ensure compliance.

## **⚠ Automatic Agitation**

- Units are equipped with an automatic agitation system and will activate unexpectedly.
- **CAUTION:** Do not place hands or foreign objects in the ice bin tank. Unplug the dispenser during servicing, cleaning, and sanitizing.
- **CAUTION:** To avoid personal injury, do not attempt to lift the dispenser without assistance. For heavier dispensers, use a mechanical lift.

# PRE-INSTALLATION

## Specifications & Features



### **DIMENSIONS**

Width: 44.00 inches (1118 mm)  
Depth: 31.13 inches (790.70 mm)  
Height: 39.36 inches (999.74 mm)

### **WEIGHT**

Shipping: 585 lbs (265 kg)  
Operating (w/ Ice): 745 lbs (338 kg)  
Ice Capacity: 312 lbs (141.52 kg)

### **ELECTRICAL**

115 VAC / 60 Hz / 6.0 Amps  
220-240 VAC / 50-60 Hz / 3.0 Amps

### **PLAIN WATER SUPPLY**

Min Flowing Pressure: 75 psi (0.516 MPa)

### **CARBONATED WATER SUPPLY**

Min Flowing Pressure: 25 psi (0.172 MPa)  
Max Static Pressure: 65 psi (0.448 MPa)

### **CARBON DIOXIDE (CO<sub>2</sub>) SUPPLY**

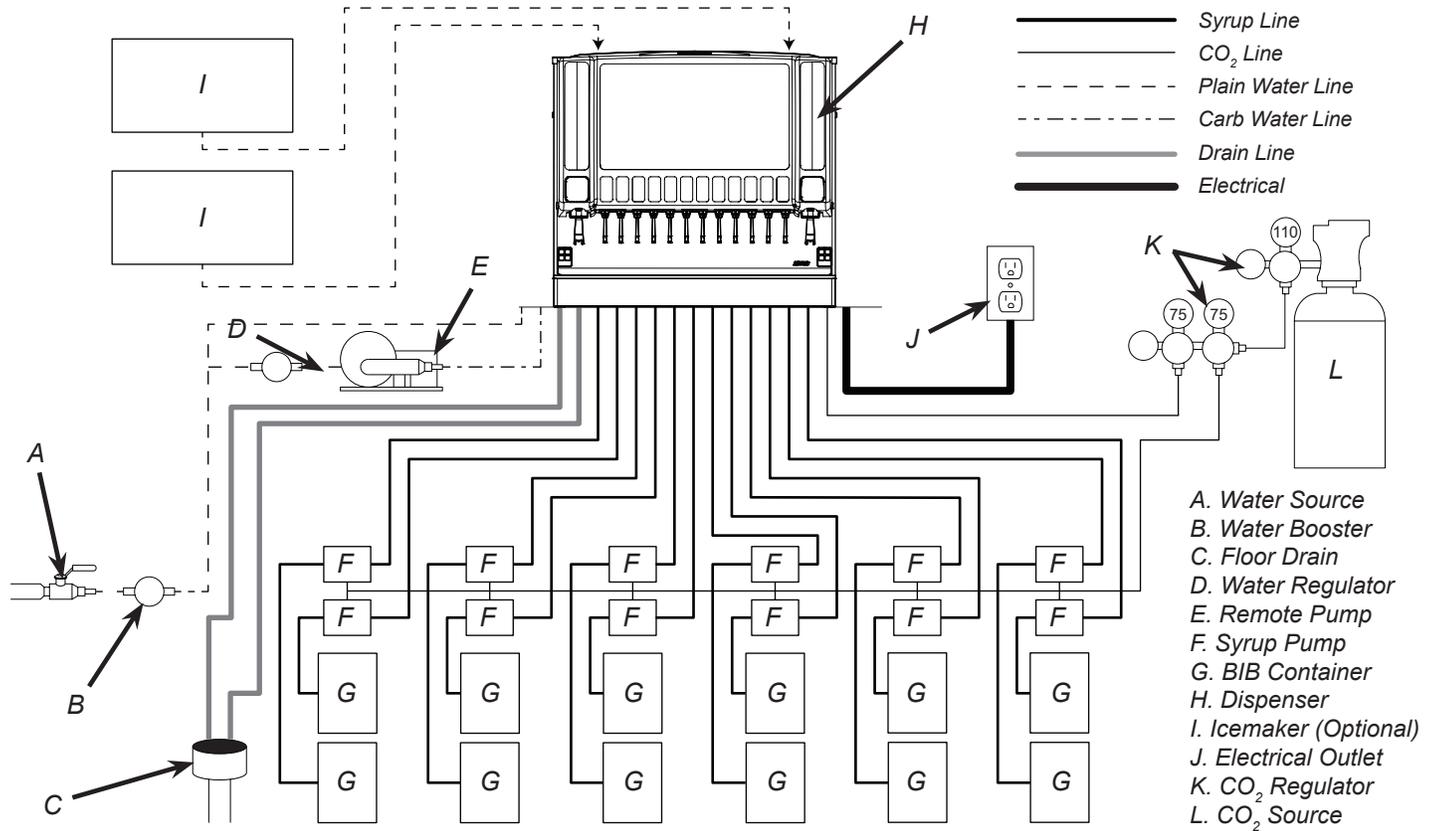
Min Pressure: 70 psi (0.483 MPa)  
Max Pressure: 80 psi (0.552 MPa)

### **FITTINGS**

Carbonator Inlet: 3/8 inch barb  
Plain Water Inlet: 3/8 inch barb  
Brand Syrup Inlets: 3/8 inch barb  
Flavor Shot Inlets: 3/8 inch barb  
CO<sub>2</sub> Inlet: 3/8 inch barb

**This unit emits a sound pressure level below 70 dB**

# General System Overview



## Pre-Installation Checklist

### TOOLS REQUIRED:

- Oetiker Pliers
- Tubing Cutters
- Wrench
- Slotted Screwdriver
- Phillips Screwdriver
- Drill

### BIB SYSTEM:

- BIB Rack
- BIB Syrup Boxes
- BIB Regulator Set
- BIB Connectors

### POST MIX ACCESSORIES:

- High Pressure CO<sub>2</sub> Regulator
- Low Pressure CO<sub>2</sub> Regulator Manifold
- CO<sub>2</sub> Supply
- Chain for CO<sub>2</sub> Tank
- Beverage Dispenser
- Beverage Tubing
- Oetiker Clamp Fittings
- Water Booster (Lancer PN: 82-3401 or MC-163172)
- Water Regulator (supplied with unit)

### CONSIDER THE FOLLOWING BEFORE INSTALLATION:

- Location of Water Supply Lines
- Location of Drain
- Location of Electrical Outlet
- Location of Heating and Air Conditioning Ducts
- Do you have enough space to install the dispenser?
- Is counter-top level?
- Can the counter-top support the weight of the dispenser? (Include the weight of an ice machine plus weight of ice, if necessary)
- Is dispenser located away from direct sunlight or overhead lighting?

# Features of the Sensation 44

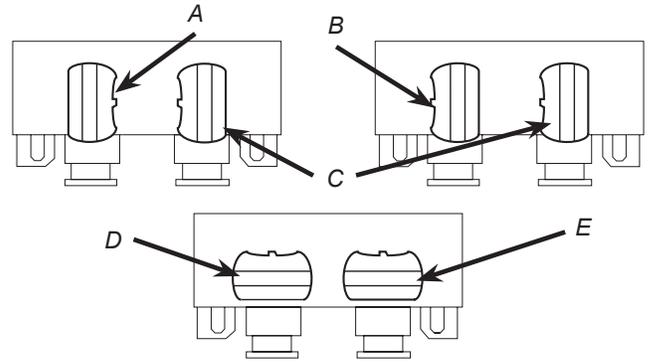
## Three-Way Adjustable Back Blocks

- Allows for flexibility between carbonated or plain water drinks on the valves of your choice.
- To set adjustable back blocks, turn the shut-off stem to the desired location, refer to the image below:

**NOTE**

There is 100% flexibility on the 22", 6 valve and the 30" 8 valve dispensers.

The 30", 10 valve and the 25" 8 valve dispensers have space restrictions, so the two center valves are plumbed only for carbonated watered drinks and are non-adjustable.



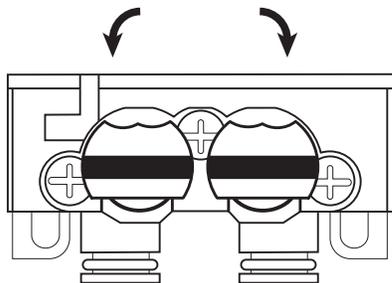
A. Plain Water ON    D. Water Closed  
 B. Carb Water ON    E. Syrup Closed  
 C. Syrup ON

## Plain Water Button Capability - (Updated January 2019)

**NOTE**

The following are instructions for an optional water button kit (Kit Part Number: 82-5262/01). See instructions included with kit for any additional information.

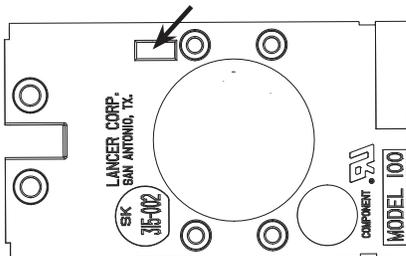
1. Remove the merchandiser from the unit.
2. Disconnect the valve wire harness, close the valve stems on the back block, and lift the retainer clip to remove the valve from the unit.



Closed Position

**NOTE**

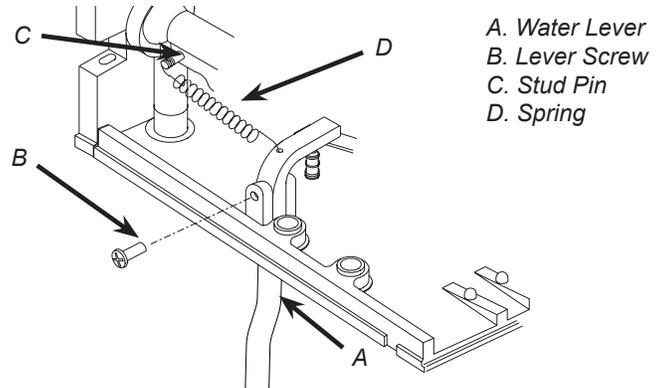
For valves with no existing water lever installed, use a screwdriver to rupture the rectangular hole on the right side of the bottom plate.



3. Slide the soda/water lever into hole in the bottom plate and attach to valve using the lever screw. Attach one end of lever spring into outer groove of existing stud pin and other end into hole on the top of lever.

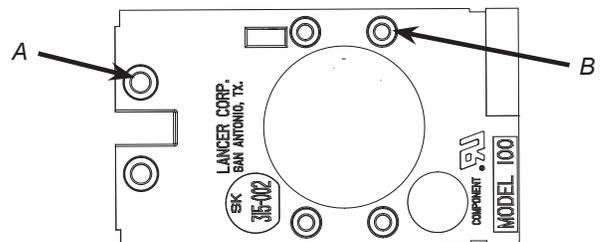
**NOTE**

If there is no existing stud pin, press new stud pin supplied with kit (PN: 04-0724) into hole in upper body of valve.



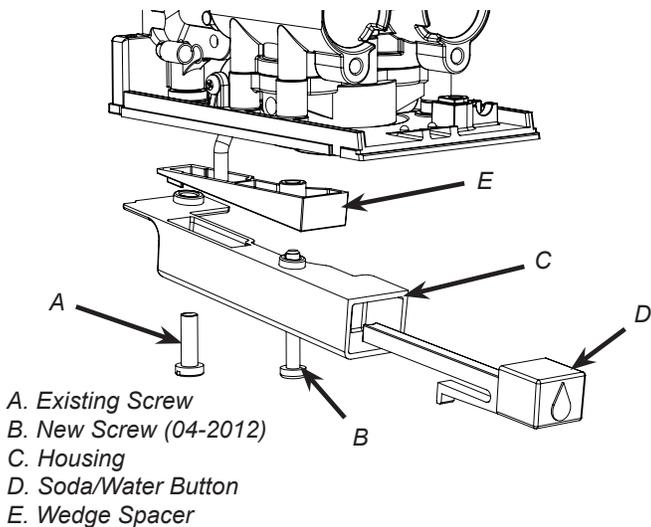
A. Water Lever  
 B. Lever Screw  
 C. Stud Pin  
 D. Spring

4. Unscrew the front and back screws on the right and bottom plate.



A. Existing Back Screw  
 B. Replace Front Screw

- Screw the push button housing along with the wedge spacer onto the bottom plate.



- Re-connect valve to back block, re-connect valve wire harness, then open the valve stems on the back block.
- Re-attach merchandiser to unit.

## INSTALLATION

### Read This Manual

This manual was developed by Lancer Corporation as a reference guide for the owner/operator and installer of this dispenser. Please read this manual before installation and operation of this dispenser. See pages 19 - 23 for troubleshooting or service assistance. If the service cannot be corrected please call your Service Agent or Lancer Customer Service. Always have your model and serial number available when you call.

### Unpacking the Dispenser

- Set shipping carton upright on the floor then cut package banding straps and remove.
- Open top of carton and remove interior packaging.
- Lift carton up and off of the unit.
- 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 shipping base.

- Remove accessory kit and loose parts from ice compartment.

#### NOTE

Inspect unit for concealed damage. If evident, notify delivering carrier and file a claim against the same.

- If leg kit has been provided, assemble legs by tilting unit.

### Selecting/Preparing a Counter Location

#### NOTE

The dispenser should only be installed in a location where it can be overseen by trained personnel

- Select a level, well ventilated location that is in close proximity to a properly grounded electrical outlet, within five (5) feet (1.5 m) of a drain, a water supply that meets the requirements shown in the *Specifications* section found on page 4, away from direct sunlight or overhead lighting, and has sufficient clearance for air circulation.
- Sufficient clearance must be provided, if an ice maker is not installed, to allow filling ice compartment from a five gallon bucket (a minimum of 16 inches is recommended).

- The selected location should be able to support the weight of the dispenser, ice and possibly an icemaker being installed after counter cut out is made. Total weight (with icemaker) for this unit could exceed 800 pounds (363.6kg).

#### NOTE

Lancer does **NOT** recommend the use of shaved or flake ice in the dispenser.

- Unit may be installed directly on counter-top or on legs. If installed directly on the counter, unit must be sealed to the counter-top with an FDA approved sealant. If an icemaker is to be mounted on top of dispenser, do not install dispenser on legs.

## NOTE

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

5. Select a location for the remote pump deck, syrup pumps, CO<sub>2</sub> tank, syrup containers, and water filter (recommended). Please see *General System Overview* on page 5 for reference.
6. Cut out required opening for the water, syrup, and CO<sub>2</sub> lines in the designated dispenser location.

## Leveling the Dispenser:

In order to facilitate proper dispenser drainage, ensure that the dispenser is level, front to back and side to side. Place a level on the top of the rear edge of the dispenser. The bubble must settle between the level lines. Repeat this procedure for the remaining three sides. Level unit if necessary. For optimum performance place the unit at a 0° tilt. The maximum tilt is 5°.

## NOTE

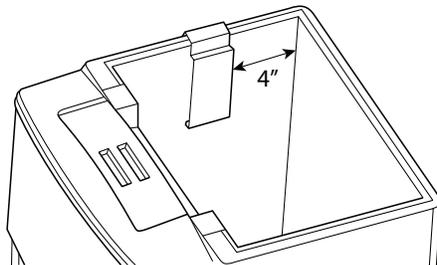
To assure that beverage service is accessible to all customers, Lancer recommends that counter height and equipment selection be planned carefully. The 2010 ADA Standards for Accessible Design states that the maximum reach height from the floor should be no more than 48" if touch point is less than 10" from the front of the counter, or a maximum of 46" if the touch point is more than 10" and less than 27" from the front of the counter. For more information about the customer's legal requirements for the accessibility of installed equipment, refer to 2010 ADA Standards for Accessible Design - <http://www.ada.gov>.

## Installing an Icemaker (if necessary)

### ⚠ ATTENTION

When installing an icemaker on the dispenser, use a bin thermostat to control the ice level (see below). This will prevent damage to the dispensing mechanism. The bracket for mounting a thermostat is located in the ice bin. During the automatic agitation cycle and while dispensing ice, ensure there is adequate space between the top of the ice level and the bottom of the icemaker so the ice can move without obstruction. Contact your icemaker manufacturer for information on a suitable bin thermostat.

1. Install the icemaker per manufacturer specifications. Points of consideration include drainage, ventilation, and drop zones.
2. An adapter plate is required when installing an icemaker. Contact your Sales Representative or Lancer Customer Service for more information.

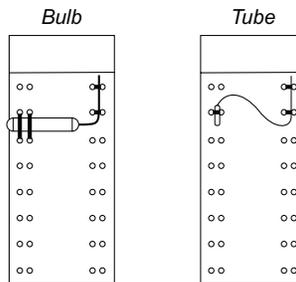


3. A bin thermostat is required in order to control the level of ice in the dispenser (Refer to ATTENTION). Contact your icemaker manufacturer to obtain the correct bin thermostat.
4. Bin thermostat should be a minimum of 2" below the top edge of the dispenser. The preferred location of the bin thermostat is on the left side wall.

### ⚠ ATTENTION

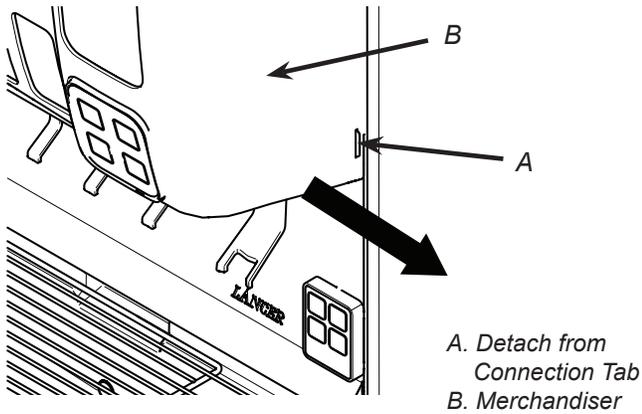
Failure to use an ice bin thermostat will not only void your IBD's warranty but will result in the inability to control the level of ice in the ice bin which can cause damage to your dispenser.

5. Ensure the icemaker is installed properly to allow for removal of the Merchandiser.
6. Ensure manual fill is accessible.
7. Clean and maintain icemaker per manufacturer's instructions.

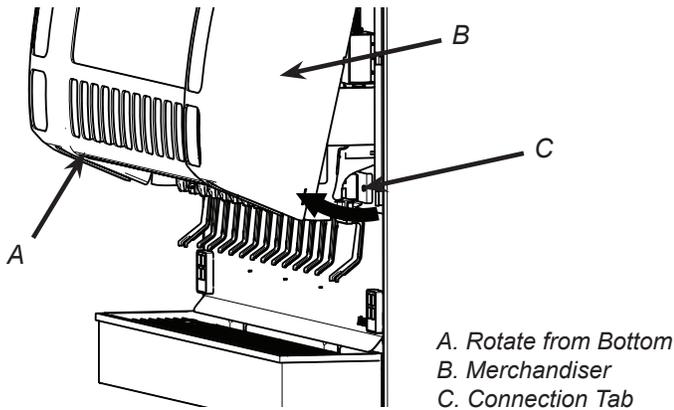


# Merchandiser Installation/Removal

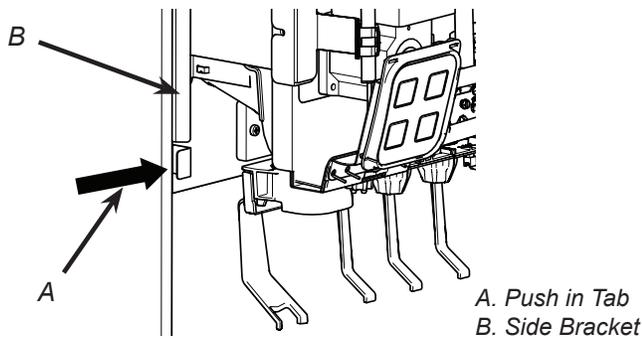
1. To remove the merchandiser, first detach the left and right side of the merchandiser from the connection tabs by pulling away from the unit.



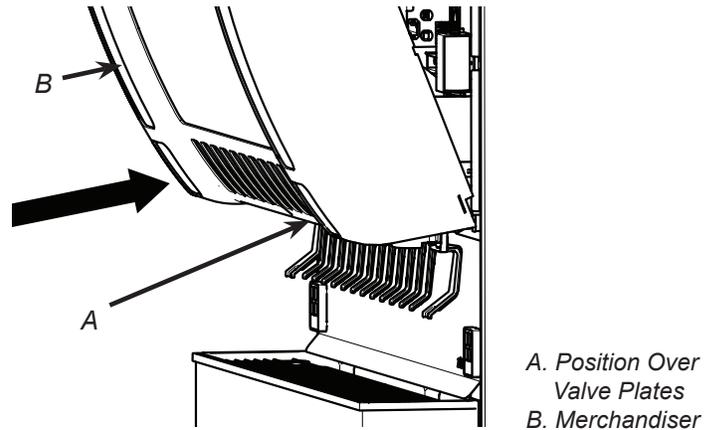
2. Rotate the merchandiser, away from the unit, from the bottom to disengage from valve block.



3. Lift the merchandiser straight up to detach from the top of the ice bin and remove from the unit.
4. To install the merchandiser, firmly push the connection tabs toward the center of the unit in order to create a clear path for the install.



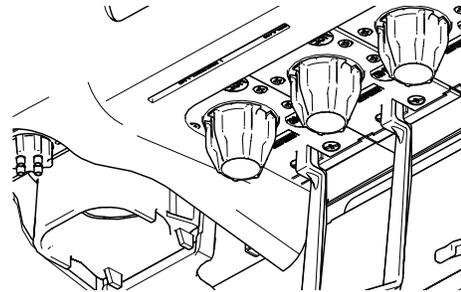
5. Position the lower edge of the merchandiser over each of the valve plates.



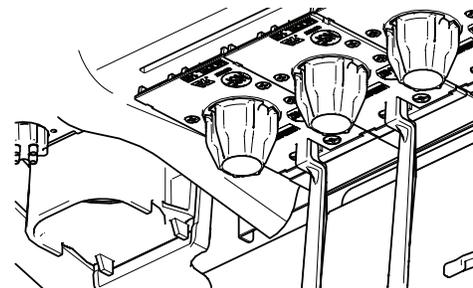
## NOTE

Merchandiser needs to be installed over the valve plates for proper installation.

### CORRECT



### INCORRECT



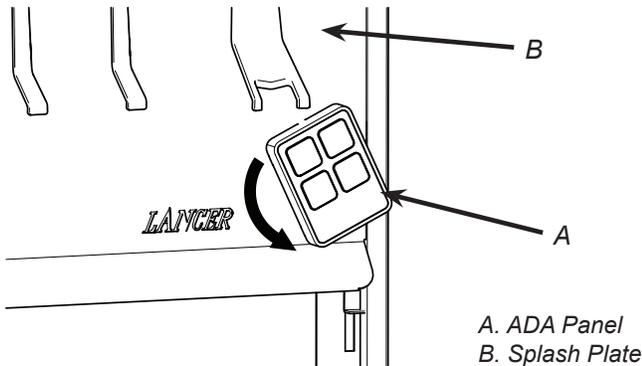
6. Guide the edges of the merchandiser up, to the outside of the side brackets of the unit.
7. Hook the top of the merchandiser to the manual fill ice chute. It is recommended to remove the front ice bin lid before installation.
8. Verify that the connection tabs are locked in the openings on the sides of the merchandiser.

# Dispenser Installation

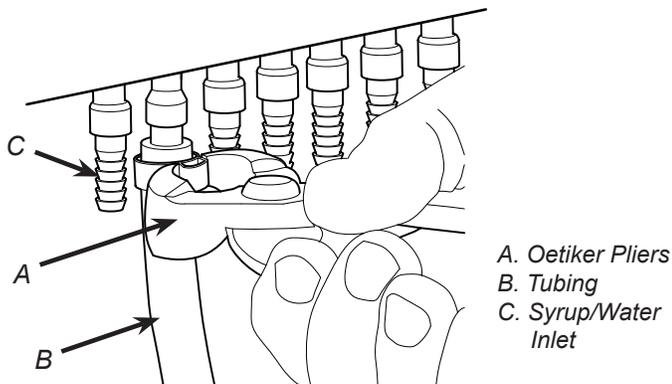
## NOTE

The installation, and relocation if necessary, must be carried out by qualified personnel with up-to-date knowledge and practical experience, in accordance with current regulations.

1. Remove the cup rest, drip tray, and top cover from the unit.
2. Twist/Rotate the ADA panel, located on the unit's splash plate, in a counterclockwise direction up to a 45° angle.

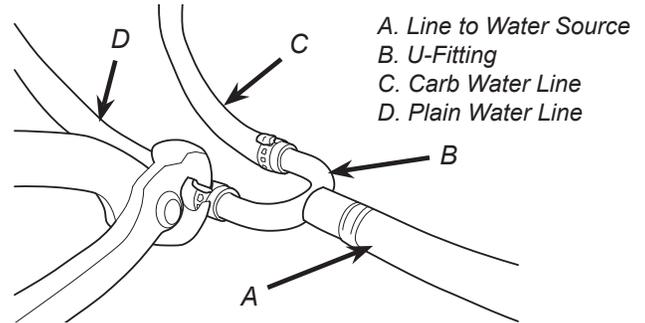


3. Carefully pull ADA panel and electric wire harness from the unit's splash plate, until the harness connector is visible.
4. Disconnect ADA harness and remove from the unit. Repeat Steps 2-4 for second ADA panel.
5. Remove the unit's splash plate and merchandiser.
6. Route appropriate tubing from the water source to the plain water inlet at the front of the unit and connect tubing to inlet using the oetiker pliers and fittings, (see *Plumbing Diagrams* on the front of the unit or on page 26 for reference).

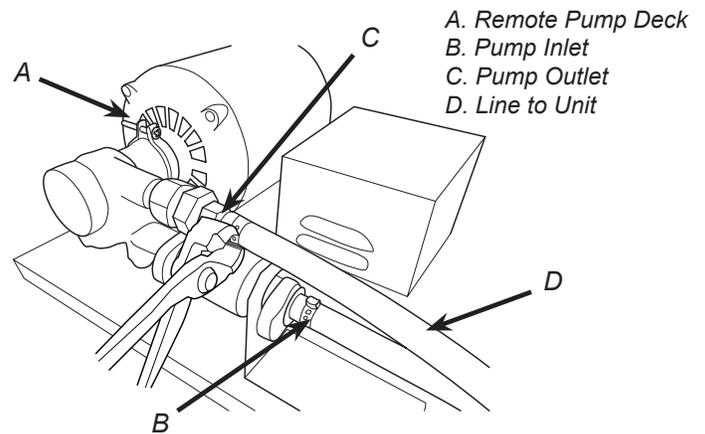


7. Connect tubing to water source then flush water lines to check for leaks.
8. If necessary, install water booster (Lancer PN MC-163172) between water supply and the unit.

9. Using tubing cutters, cut plain water line and install U-fitting then route appropriate tubing from the U-fitting to the carbonated water inlet at the unit.



10. Cut carbonated water line and install remote pump deck per manufacturer's specifications.

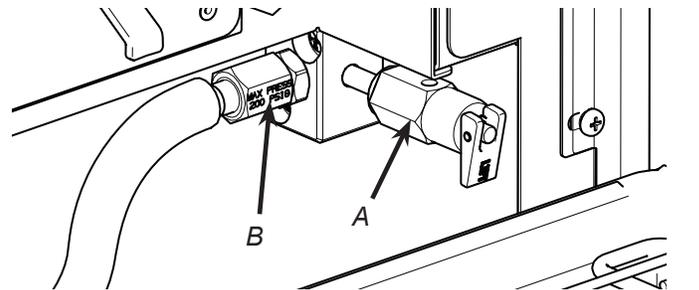


11. Complete the carbonated water line connection between the remote pump deck and carbonated water inlet at unit.
12. Install a shut-off valve in the water line feeding the deck.

## NOTE

If a separate water line is run for plain water, ensure that it also has a shut-off valve.

13. Route appropriate tubing from the syrup pump location to the syrup inlets and connect tubing to all syrup inlets.
14. Route appropriate tubing from the CO<sub>2</sub> source location to the CO<sub>2</sub> inlet on the unit and connect tubing to inlet.

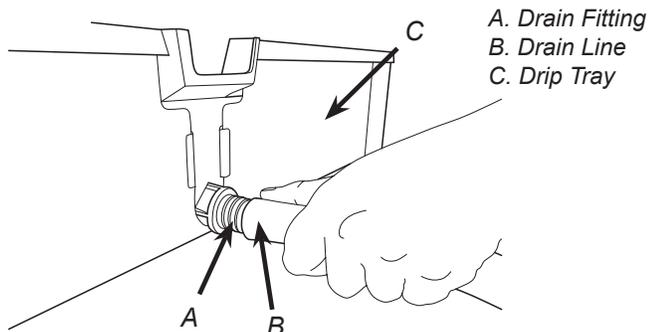


- Route the power supply cord to a grounded electrical outlet of the proper voltage and amperage rating.

**⚠ WARNING**

**DO NOT PLUG UNIT INTO GROUNDED ELECTRICAL OUTLET AT THIS TIME.** Make sure that all water lines are tight and unit is dry before making any electrical connections

- Route drain hose from designated open type drain to both fittings on Drip Tray and connect hose to fittings.



**⚠ CAUTION**

Drain line must be insulated with a closed cell insulation. Insulation must cover the entire length of the drain hose, including fittings. The drain should be installed in such a manner that water does not collect in sags or other low points, as condensation will form.

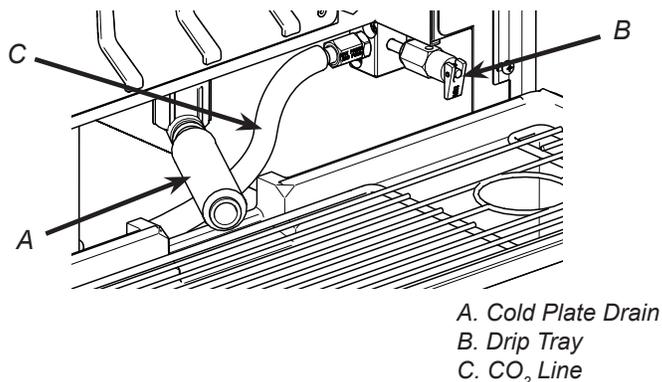
**⚠ ATTENTION**

Pouring hot water into drain may cause the Drain Tube to collapse. Allow only warm or cold water to enter Drain Tube. Pouring coffee tea and similar substances into drain may cause the Drain Tube to become clogged with coffee or tea grounds, or other solid particles.

- Reattach Drip Tray and Cup Rest to unit.

**NOTE**

When installing the drip tray, make sure both of the cold plate drain hoses are lined up to the openings in the drip tray. Make sure the end of the hose rests at least a half of an inch over the edge of the opening to ensure proper drainage of the cold plate.

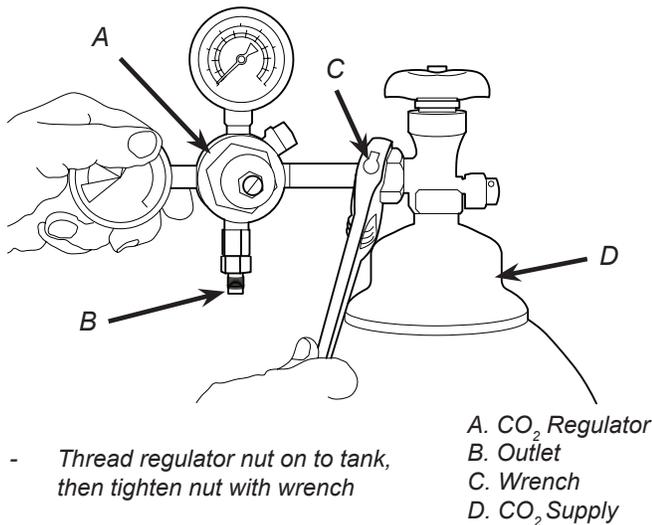


## Installing CO<sub>2</sub> Supply

- Connect high pressure CO<sub>2</sub> regulator assembly to CO<sub>2</sub> cylinder or bulk system.

**⚠ ATTENTION**

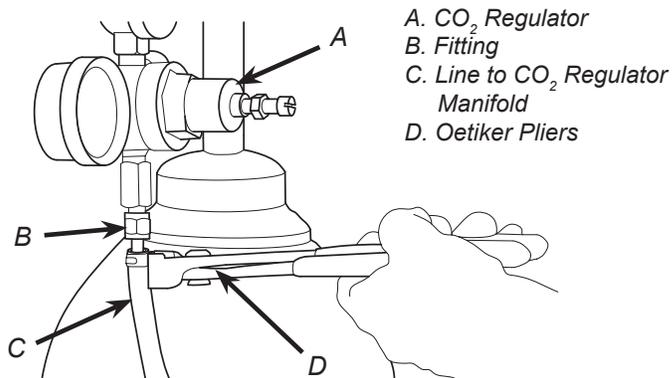
Before installing regulator, assure that a seal (washer or o-ring) is present in regulator attachment nut.



- Route appropriate tubing from the low pressure CO<sub>2</sub> regulator manifold location to the inlet on the CO<sub>2</sub> regulator attached to source and connect tubing.

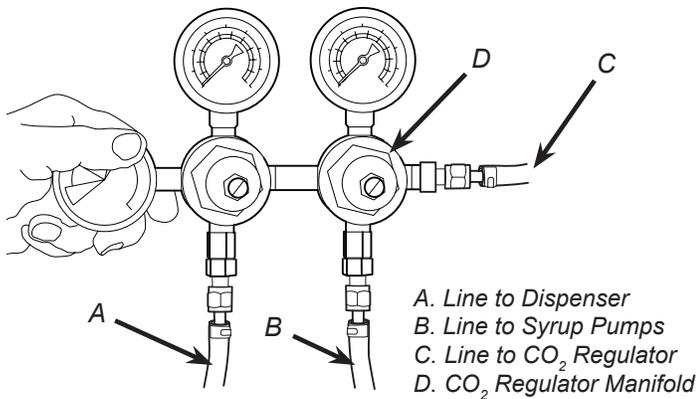
**⚠ ATTENTION**

A dedicated CO<sub>2</sub> regulator is required to supply the CO<sub>2</sub> inlet at the unit as well as to all syrup pumps.



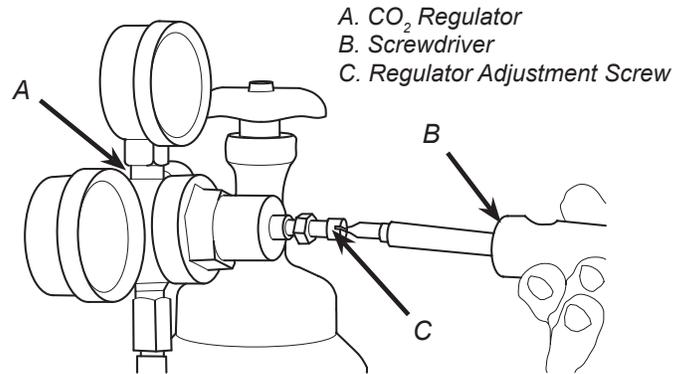
- Connect tubing routed from the CO<sub>2</sub> inlet at the unit to one of the low pressure CO<sub>2</sub> regulator manifold outlets.

- Connect tubing routed from the tee at the syrup pumps to the second outlet of the low pressure CO<sub>2</sub> regulator manifold.



- Using a wrench, loosen lock nut on the regulator adjustment screw of the high pressure CO<sub>2</sub> regulator connected to the source, then using a screwdriver back out lock nut screw all the way.

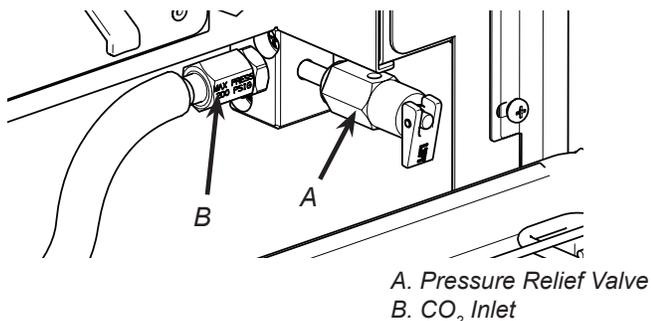
**⚠ WARNING**  
**DO NOT TURN ON CO<sub>2</sub> SUPPLY AT THIS TIME**



- Repeat Step 6 for both low pressure CO<sub>2</sub> regulators on the regulator manifold routed to the unit and the syrup pumps.

## Dispenser Setup

- Turn on water source.
- Open the pressure relief valve located on the front of the unit, by flipping up on the valve cap lever. Hold open until water flows from the relief valve then close (flip down) the relief valve.



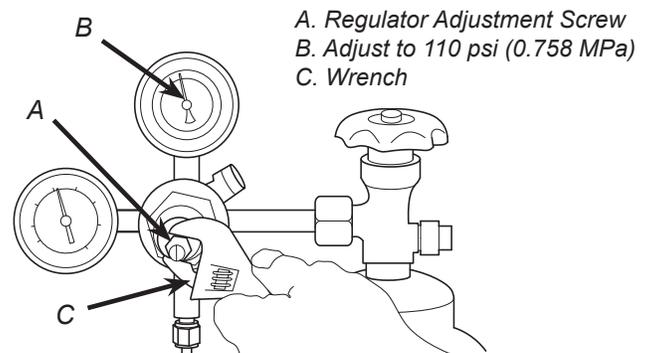
- Verify all Bag-In-Box contains syrup and check all connections for leaks.
- Place enough ice in the ice bin to fill approximately 1/2 of the bin before plugging in the unit.
- Connect unit power cord to grounded electrical outlet.

### ⚠ WARNING

The dispenser must be properly electrically grounded to avoid serious injury or fatal electrical shock. The power cord has a three-prong grounded plug. If a three-hole grounded electrical outlet is not available, use an approved method to ground the unit. Follow all local electrical codes when making connections. Each dispenser must have a separate electrical circuit. Do not use extension cords. Do not connect multiple electrical devices on the same outlet.

- Test the motor operation by pushing both ice chute levers until agitator motor begins to turn.
- Activate each valve to ensure a good flow of water is achieved.
- Ensure pump deck is turned OFF before turning on CO<sub>2</sub>.

- Turn on CO<sub>2</sub> at the source then, using a screwdriver, adjust the high pressure regulator at the source to 110 psi (0.758 MPa) then tighten locknut with wrench.



- Adjust both of the low pressure regulators on the regulator manifold to 75 psi (0.517 MPa) then tighten locknut with wrench.
- Activate each valve until gas-out.
- Plug in the remote carbonator pump deck, if not already done so, and turn the switch to the ON position.
- Activate each valve until the carbonator pump comes on. Release the button, allow carbonator to fill and stop. Repeat this process until a steady flow of carbonated water is achieved.

### NOTE

The pump deck has a 3 minute timeout feature. If the timeout occurs, turn the deck OFF then ON by flipping the switch on the control box.

### 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 minutes. Open the cylinder valve after check.

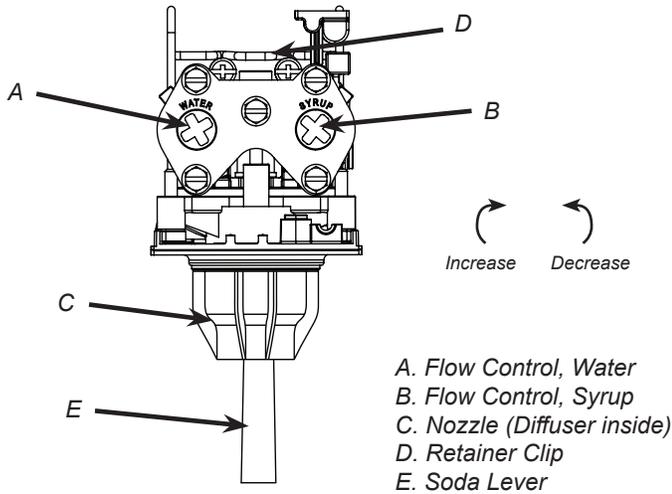
- Activate each valve to purge air from the syrup lines.

# Adjust Water Flow Rate & Syrup/Water Ratio

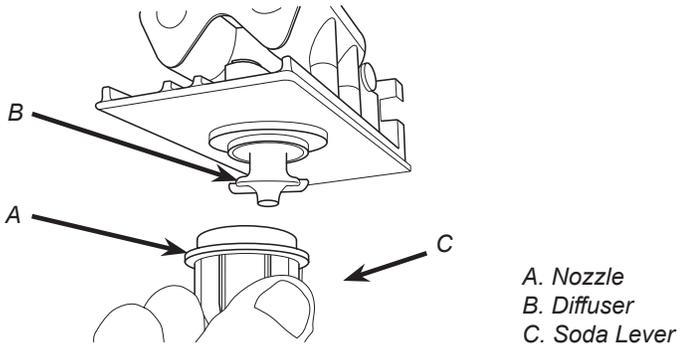
## NOTE

Ensure there is ice on the cold plate and the lines are cold before attempting to set the flow rates on the valves. The drink temperature should be no higher than 40°F (4.4°C) when flow rates are set.

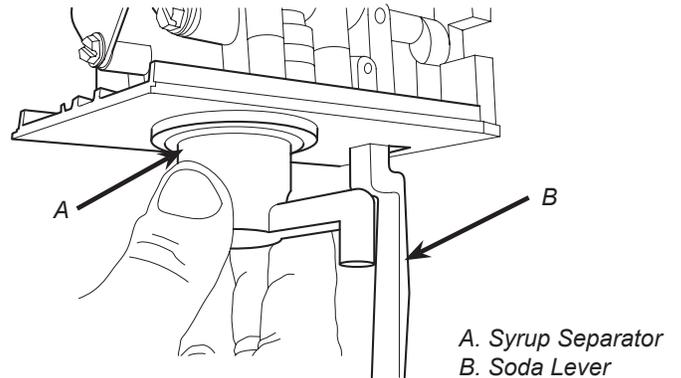
1. Remove merchandiser.
2. Close syrup shut-off at mounting block for first valve.
3. Using a Lancer ratio cup verify water flow rate (5 oz. in 4 sec.). Use a screwdriver to adjust if needed.



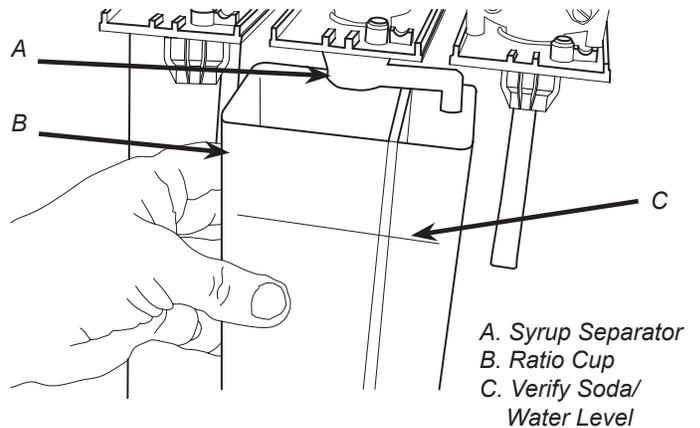
4. Remove nozzle by twisting counter clockwise and pulling down, then remove diffuser by pulling down.



5. Install Lancer (yellow) syrup separator (PN 54-0031) in place of nozzle.



6. Re-open syrup shut-off at mounting block.
7. Activate valve to purge syrup until steady flow is achieved.
8. Using a Lancer brix cup, activate the valve and capture a sample. Verify that the syrup level is even with the water level. Use a screwdriver to adjust if needed.



9. Remove syrup separator and reinstall nozzle. Replace valve cover.
10. Repeat steps 1-8 for each valve.
11. Re-install merchandiser, splash plate, and top cover.

# Volumetric Valve Adjustment

**NOTE**

The Volumetric Valve is an optional valve for the 44" Sensation dispenser

VALVE SPECIFICATIONS		
<b>Finished Drink Flow Rates</b>	3.0 oz/sec (88.7 ml/sec)	
	2.25 oz/sec (66.6 ml/sec)	
	1.5 oz/sec (44.4 ml/sec)	
<b>Flowing Pressure Requirements</b>	<b>MINIMUM</b>	<b>MAXIMUM</b>
Water	40 psi (0.276 MPa)	110 psi (0.758 MPa)
Syrup	20 psi (0.138 MPa)	70 psi (0.483 MPa)
<b>Electrical Requirements</b>	24 VAC, 50/60 Hz	

1. Remove the ID panel from the front of the first valve.
2. Insert the programmer's 10-pin connector into the ID panel plug located on the front of the circuit board.
3. When properly connected, the programmer will run a self diagnostic test. The display will show all "8's" with the decimal points lighted. After about three (3) seconds, the display indicates the setting of the dip switches.

**NOTE**

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

4. After the programmer is connected, Press the "Read Mem" button.
5. Press the "Ratio +" or the "Ratio -" key until the desired ratio is displayed.
6. Verify the drink type by pressing "Carb Toggle" to select "C" for carbonated or "n" for non-carbonated.
7. Press the "Enter" button to program the valve with the setting on the display.
8. Verify Ratio by pressing "Read Mem".
9. Disconnect the programmer and repeat steps 4-9 for each valve.



- Handheld Programmer Volumetric Valve

# CLEANING AND SANITIZING

## General Information

- Lancer equipment (new or reconditioned) is shipped from the factory cleaned and sanitized in accordance with NSF guidelines. The operator of the equipment must provide continuous maintenance as required by this manual and/or state and local health department guidelines to ensure proper operation and sanitation requirements are maintained.

### NOTE

The cleaning procedures provided herein pertain to the Lancer equipment identified by this manual. If other equipment is being cleaned, follow the guidelines established by the manufacturer for that equipment.

- Cleaning should be accomplished only by trained personnel. Sanitary gloves are to be used during cleaning operations. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

### ⚠ ATTENTION

- Use sanitary gloves when cleaning the unit and observe all applicable safety precautions.
- **DO NOT** use a water jet to clean or sanitize the unit.
- **DO NOT** disconnect water lines when cleaning and sanitizing syrup lines, to avoid contamination.
- **DO NOT** use strong bleaches or detergents; These can discolor and corrode various materials.
- **DO NOT** use metal scrapers, sharp objects, steel wool, scouring pads, abrasives, or solvents on the dispenser.
- **DO NOT** use hot water above 140° F (60° C). This can damage the dispenser.
- **DO NOT** spill sanitizing solution on any circuit boards. Insure all sanitizing solution is removed from the system.

## Cleaning and Sanitizing Solutions

### Cleaning Solution

Mix a mild, non-abrasive detergent (e.g. Sodium Laureth Sulfate, dish soap) with clean, potable water at a temperature of 90°F to 110°F (32°C to 43°C). The mixture ratio is one ounce of cleaner to two gallons of water. Prepare a minimum of five gallons of cleaning solution. Do not use abrasive cleaners or solvents because they can cause permanent damage to the unit. Ensure rinsing is thorough, using clean, potable water at a temperature of 90°F to 110°F. Extended lengths of product lines may require additional cleaning solution.

### Sanitizing Solution

Prepare the sanitizing solution in accordance with the manufacturer's written recommendations and safety guidelines. The type and concentration of sanitizing agent recommended in the instructions by the manufacturer shall comply with 40 CFR §180.940. The solution must provide 200 parts per million (PPM) chlorine (e.g. Sodium Hypochlorite or bleach) and a minimum of five gallons of sanitizing solution should be prepared.

### Integrity of Plastic Finish

While caring for your unit, please note that there may be some cleaners that may compromise the integrity of the powder coated finish. The recommended method for cleaning the powder coated surface is to use warm water and a mild soap such as Windex, Dawn, 409, etc. Certain chemical cleaners such as Acetone, Mineral Spirits, or Lacquer thinners could cause aesthetic damage. Thoroughly rinse with water after cleaning the surface.

### Other Supplies Needed:

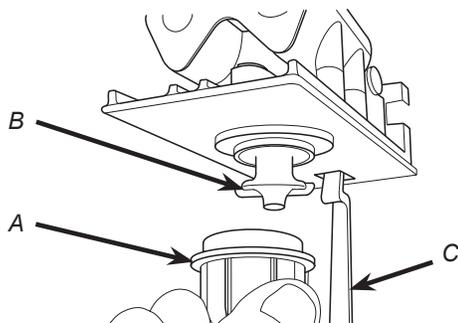
1. Clean cloth towels
2. Bucket
3. Extra nozzle
4. Sanitary gloves
5. Small brush (PN 22-0017)

## Scheduled Maintenance/Cleaning

<b>As Needed</b>	<ul style="list-style-type: none"> <li>Keep exterior surfaces of unit clean using a clean, damp cloth.</li> </ul>
<b>Daily</b>	<ul style="list-style-type: none"> <li>Using the cleaning solution, clean top cover and all exterior stainless steel surfaces.</li> <li>Clean exterior of dispensing valves and ice chute.</li> <li>Remove cup rest then clean the drip tray and cup rest. Replace cup rest and drip tray when finished.</li> <li>Wipe clean all splash areas using a damp cloth soaked in cleaning solution.</li> <li>Clean beverage nozzles as specified by the section "Cleaning and Sanitizing Nozzles".</li> </ul>
<b>Monthly</b>	<ul style="list-style-type: none"> <li>Clean the ice bin, auger, and ice chute assembly as specified by the section "Cleaning and Sanitizing Ice Bin, Auger, and Ice Chute" on pages 17-18.</li> </ul>
<b>Every Six Months</b>	<ul style="list-style-type: none"> <li>Clean the syrup lines as specified by the section "Cleaning and Sanitizing Syrup Lines - Bag in Box" on page 19.</li> <li>Pull out unit (if applicable) and clean behind and underneath. Check for any loose components or noises.</li> </ul>

## Cleaning and Sanitizing Nozzles

1. Disconnect power, so as to not activate valve while cleaning.
2. Remove merchandiser to reveal valves.
3. Remove nozzle by twisting counter clockwise and pulling down.
4. Remove diffuser by pulling down.
5. Rinse nozzle and diffuser with warm water.
6. Wash nozzle and diffuser with cleaning solution then immerse in sanitizing solution and let sit for fifteen (15) minutes.
7. Set nozzle and diffuser aside and let air dry. **DO NOT** rinse with water after sanitizing.
8. Reconnect diffuser and nozzle.
9. Connect power.
10. Taste the drink to verify that there is no off-taste. If off-taste is found, flush syrup system again.



A. Nozzle  
B. Diffuser  
C. Soda Lever

### ⚠ CAUTION

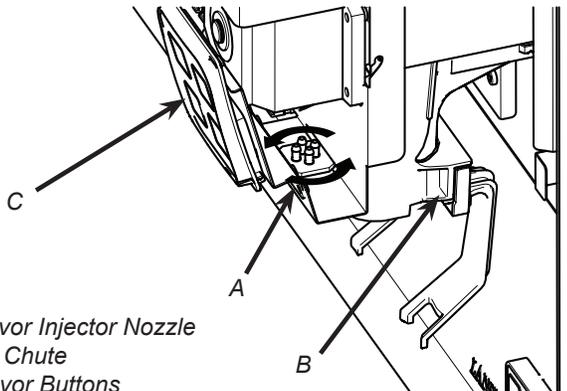
Following sanitation, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.

## Cleaning and Sanitizing Flavor Injector Nozzles

1. Disconnect power, so as to not activate valve while cleaning.
2. Disconnect the two (2) lower, horizontal LED light bars and remove from unit.
3. Rotate the flavor injector nozzle 90° to disconnect from bracket.

### NOTE

**DO NOT** disconnect flavor lines from nozzle, when removing from bracket.



A. Flavor Injector Nozzle  
B. Ice Chute  
C. Flavor Buttons

4. Using a soft cloth and the cleaning solution described on page 15, thoroughly clean the flavor injector nozzle and bracket of any residual syrup.
5. Using a soft cloth and the sanitizing solution described on page 15, thoroughly wipe down the flavor injector nozzle and bracket then let air dry. **DO NOT** rinse with water after sanitizing.
6. Repeat Steps 2-5 for second flavor injector nozzle.
7. Connect power.
8. Taste the drink to verify that there is no off-taste. If off-taste is found, flush syrup system again.

### CAUTION

Following sanitation, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.

## Cleaning and Sanitizing Ice Bin, Auger, and Ice Chute

### NOTE

It is recommended to perform this procedure monthly, or more often if desired. Use the cleaning solution described above. An alternate solution of one part water to one part vinegar may be used to remove water spots and calcium deposits.

### NOTE

Refer to the Automatic Agitation Warning on page 4.

1. Disconnect power to the dispenser
2. Remove the Merchandiser and Top Cover.
3. Remove Ice Chute Lever, then remove Splash Plate Assembly by lifting it up and out from the dispenser face.

### NOTE

**Always** remove the ice chute lever before removing the splash plate.

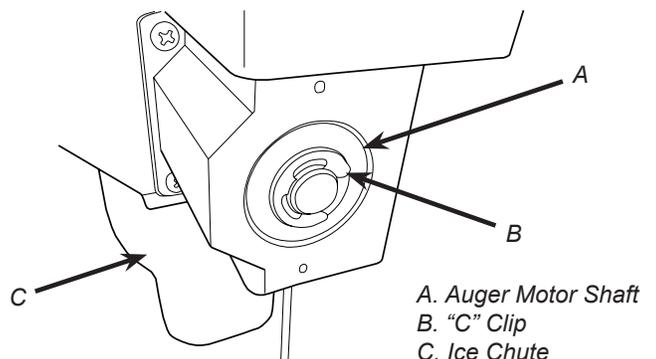
4. Remove or melt out any remaining ice from the ice bin.
5. Disconnect the two (2) lower, horizontal LED light bars and remove from unit.
6. Disconnect vertical LED light bar, next to flavor injector nozzle, from the junction box and remove from unit.
7. Repeat previous step for second light bar on opposite side of the unit.

8. Rotate the flavor injector nozzle 90° to disconnect from bracket.

### NOTE

**DO NOT** disconnect flavor lines from nozzle, when removing from bracket.

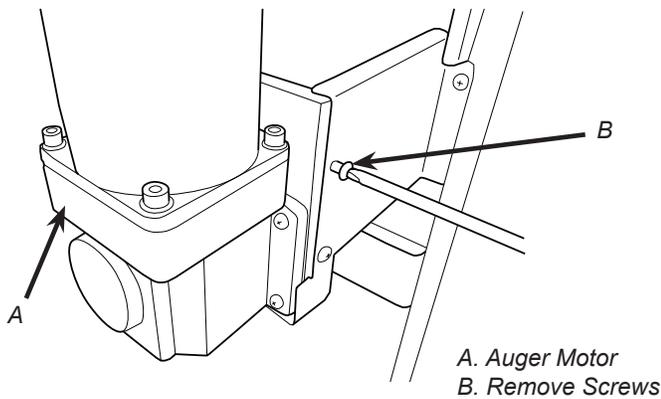
9. Use a screwdriver to remove the Auger Motor shaft cover.
10. Remove the "C" clip from the Auger Motor Shaft.



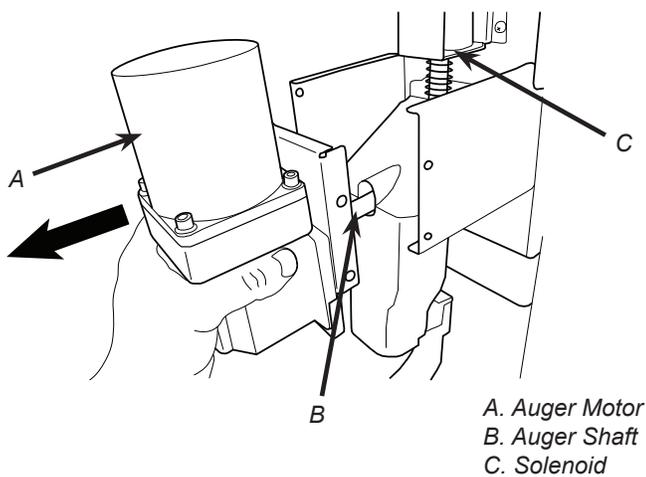
A. Auger Motor Shaft  
B. "C" Clip  
C. Ice Chute

11. Disconnect the Auger Motor wire harness from junction box.

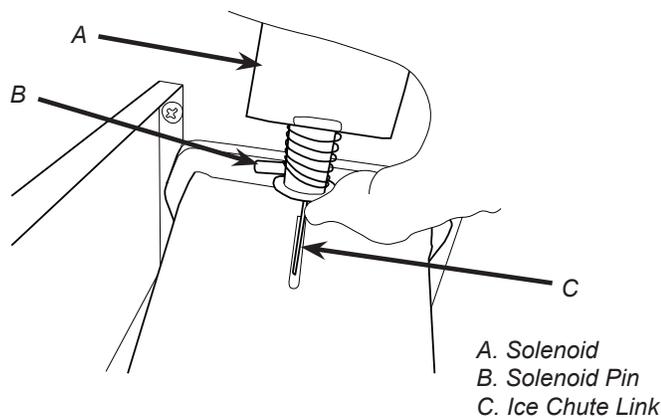
12. Remove the four (4) screws from the bracket holding the Auger Motor, flavor injector bracket, and LED light bracket.



13. Slide the Motor and Mounting Plate Assembly off of the Auger Shaft.

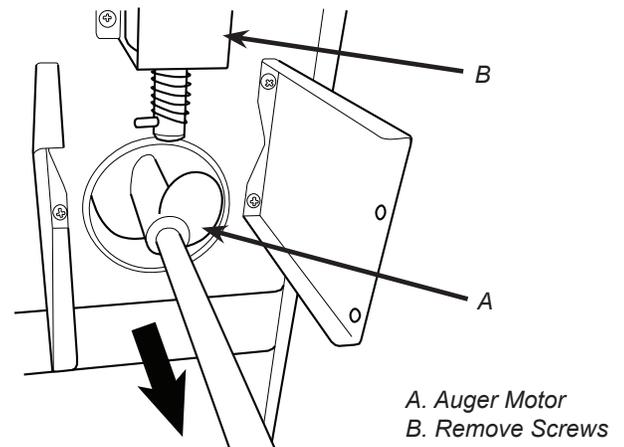


14. Remove the Auger Motor Shaft Key and set aside.  
 15. Remove the second clip from the Auger Shaft.  
 16. Disconnect the Ice Chute wire harness from the junction box.  
 17. Disconnect the solenoid from Ice Chute link by pushing pin through shaft until link is free. (Pin shown in out position)

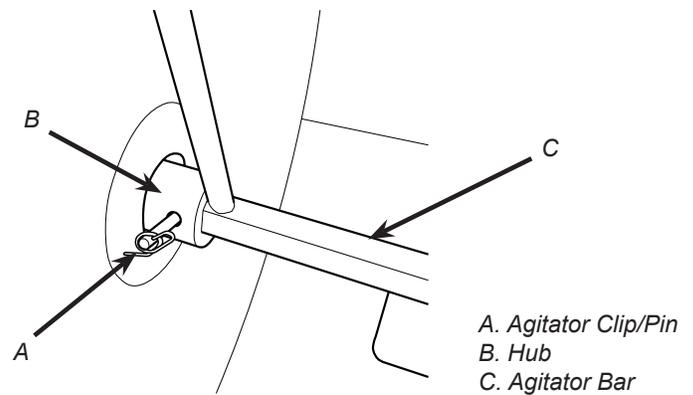


18. Remove the Ice Chute Assembly by removing four (4) screws that secure to unit and set aside.

19. Remove Auger by pulling straight out from unit and set aside.



20. Repeat Steps 5 - 14 for second Auger Motor Assembly.  
 21. Remove Agitator Clip and Pin from Agitator bar in Ice Bin.



22. Remove the Agitator bar and Hub from the Ice Bin.  
 23. Remove the plastic Ice Shroud by "pinching" in the center and rotating out.  
 24. Using the Cleaning Solution (page 15) and a clean cloth or soft brush, clean the Ice Chute Assembly, Ice Shroud, Auger, all sides of the Ice Bin, and surface of the aluminum casting.  
 25. Using the Cleaning Solution and the sponge brush provided, clean all interior surfaces of the ice chute and the ice chute feed through.  
 26. Using hot water, thoroughly rinse away the cleaning solution.  
 27. Wearing sanitary gloves, use a clean cloth or towel and the Sanitizing Solution (page 15) to wash all surfaces of removable parts, sides of the Ice Bin, and surface of the aluminum casting.  
 28. Using the Sanitizing Solution and the sponge brush provided, clean all interior surfaces of the ice chute and the ice chute feed through.  
 29. Wearing sanitary gloves, reassemble all removable parts. Ensure agitator clip is locked.  
 30. Fill unit with ice and replace Top Cover.  
 31. Reconnect Dispenser to power source.

## Cleaning and Sanitizing Syrup Lines - Bag in Box

1. Disconnect syrup lines from BIB's
2. Place syrup lines, with BIB connectors, in a bucket of warm water.
3. Activate each valve to fill the lines with warm water and flush out syrup remaining in the lines.
4. Prepare Cleaning Solution described above.
5. Place syrup lines, with BIB connectors, into cleaning solution.
6. Activate each valve until lines are filled with cleaning solution then let stand for ten (10) minutes.
7. Flush out cleaning solution from the syrup lines using clean, warm water.
8. Prepare Sanitizing Solution described above.
9. Place syrup lines into sanitizing solution and activate each valve to fill lines with sanitizer. Let sit for ten (10) minutes.
10. Reconnect syrup lines to BIB's and draw drinks to flush solution from the dispenser.
11. Taste the drink to verify that there is no off-taste. If off-taste is found, flush syrup system again.

### ⚠ CAUTION

**Following sanitation, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.**

## Cleaning and Sanitizing Flavor Injector Lines

1. Disconnect the four (4) flavor injector lines from their bag-in-box containers.
2. Place flavor injector lines, with BIB connectors, in a bucket of warm water.
3. Activate each flavor injector line to fill the with warm water and flush out any syrup remaining in the lines.
4. Prepare Cleaning Solution described on page 15.
5. Place flavor injector lines, with BIB connectors, into cleaning solution.
6. Activate each flavor injector line until lines are filled with cleaning solution then let stand for ten (10) minutes.
7. Flush out cleaning solution from the flavor injector lines using clean, warm water.
8. Prepare Sanitizing Solution described on page 15.
9. Place flavor lines into sanitizing solution and activate each line to fill with sanitizer. Let sit for ten (10) minutes.
10. Reconnect syrup lines to bag-in-box container and draw drinks to flush solution from the dispenser.
11. Taste the drink to verify that there is no off-taste. If off-taste is found, flush syrup system again.

### ⚠ CAUTION

**Following sanitation, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.**

## TROUBLESHOOTING

TROUBLE	CAUSE	REMEDY
No product when switch is activated.	<ol style="list-style-type: none"> <li>1. Malfunctioning switch assembly.</li> <li>2. No power to dispenser.</li> <li>3. Malfunctioning power supply.</li> <li>4. Malfunctioning PCB board.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace switch assembly.</li> <li>2. Check internal breaker and incoming power.</li> <li>3. Check voltage to power supply. Check fuses.</li> <li>4. Replace PCB board.</li> </ol>
No product when switch is activated.	<ol style="list-style-type: none"> <li>1. Key switch is off or key switch harness is disconnected.</li> <li>2. Malfunctioning switch assembly.</li> <li>3. Malfunctioning VersaPour valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn key switch on and/or reconnect key switch harness.</li> <li>2. Replace switch assembly.</li> <li>3. Replace module.</li> </ol>
Push chute; no response.	<ol style="list-style-type: none"> <li>1. Dispenser not connected to power source.</li> <li>2. Wiring harness not plugged in.</li> <li>3. PC board defective.</li> <li>4. Malfunctioning power supply.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect dispenser to power source.</li> <li>2. Plug in wiring harness.</li> <li>3. Replace PC board.</li> <li>4. Check voltage to power supply. Check fuses.</li> </ol>

<b>TROUBLE</b>	<b>CAUSE</b>	<b>REMEDY</b>
Push chute, ice door opens but motor does not run.	<ol style="list-style-type: none"> <li>1. Wiring harness not plugged in.</li> <li>2. PC board defective.</li> <li>3. Motor defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Plug in wiring harness.</li> <li>2. Replace PC board.</li> <li>3. Replace motor.</li> </ol>
Push chute, motor runs but ice door does not open.	<ol style="list-style-type: none"> <li>1. Solenoid not connected to PC board.</li> <li>2. Solenoid defective.</li> <li>3. PC board defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect solenoid to PC board.</li> <li>2. Replace solenoid.</li> <li>3. Replace PC board.</li> </ol>
Push chute, ice door opens, motor runs, but ice does not dispense, or ice is of poor quality.	<ol style="list-style-type: none"> <li>1. Dispenser is out of ice.</li> <li>2. Agitator pin is missing or damaged.</li> <li>3. Poor ice quality.</li> <li>4. Key not installed on agitation shaft.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill dispenser with ice.</li> <li>2. Replace agitator pin.</li> <li>3. Service ice machine.</li> <li>4. Install key on agitation shaft.</li> </ol>
Water in ice bin.	<ol style="list-style-type: none"> <li>1. Cold plate drain is obstructed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove splash plate and drip tray to obtain access to drain tubes and clear accordingly.</li> </ol>
Water leakage around nozzle.	<ol style="list-style-type: none"> <li>1. Damaged or improperly installed o-ring on nozzle.</li> </ol>	<ol style="list-style-type: none"> <li>1. If damaged, replace. If improperly installed, adjust.</li> </ol>
Miscellaneous leakage.	<ol style="list-style-type: none"> <li>1. Gap between parts.</li> <li>2. Damaged or improperly installed o-rings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten appropriate retaining screws.</li> <li>2. Replace or adjust appropriate o-rings.</li> </ol>
Noisy/cavitating carbonator pump.	<ol style="list-style-type: none"> <li>1. Insufficient incoming water supply pressure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify incoming supply water pressure to carbonator pump is min. of 25 psi (0.172 MPa), max. of 50 psi (0.345 MPa).</li> </ol>
Insufficient soda flow (carbonated drinks).	<ol style="list-style-type: none"> <li>1. Insufficient CO<sub>2</sub> supply pressure.</li> <li>2. Shutoff on mounting block is not fully open.</li> <li>3. Foreign debris in soda flow control.</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify incoming CO<sub>2</sub> pressure is between 70 psi (0.483 MPa) and 80 psi (0.552 MPa)</li> <li>2. Open shutoff fully.</li> <li>3. Remove soda flow control from valve and clean out any foreign material to ensure smooth spool movement.</li> </ol>
Insufficient water flow (plain water drinks).	<ol style="list-style-type: none"> <li>1. Insufficient incoming supply pressure.</li> <li>2. Shutoff on mounting block not fully open.</li> <li>3. Foreign debris in water flow control.</li> <li>4. Water filtration problem.</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify incoming supply water pressure to plain water inlet is a minimum of 50 psi (0.345 MPa) and a maximum of 100 psi (0.689 MPa).</li> <li>2. Open shutoff fully.</li> <li>3. Remove water flow control from valve and clean out any foreign material to ensure smooth spool movement.</li> <li>4. Service water system as required.</li> </ol>
Erratic ratio.	<ol style="list-style-type: none"> <li>1. Incoming water and/or syrup supply not at minimum flowing pressure.</li> <li>2. Foreign debris in water and/or syrup flow control.</li> <li>3. CO<sub>2</sub> regulator malfunction.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check pressure and adjust.</li> <li>2. Remove flow control from suspected valve and clean out any foreign material to ensure smooth spool movement.</li> <li>3. Repair or replace CO<sub>2</sub> regulator.</li> </ol>

TROUBLE	CAUSE	REMEDY
Insufficient syrup flow.	<ol style="list-style-type: none"> <li>1. Insufficient CO<sub>2</sub> pressure to BIB pumps.</li> <li>2. Shutoff on mounting block not fully open.</li> <li>3. Foreign debris in syrup flow control.</li> <li>4. Defective BIB pump.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust CO<sub>2</sub> pressure to BIB pumps to 80 psi (0.552 MPa) (min. 70 psi (0.483 MPa)). Do not exceed manufacturer's recommendations.</li> <li>2. Open shutoff fully.</li> <li>3. Remove syrup flow control from valve and clean out any foreign material to ensure smooth spool movement.</li> <li>4. Replace pump.</li> </ol>
Valve will not shut off.	<ol style="list-style-type: none"> <li>1. Debris in paddle arms.</li> <li>2. Solenoid plunger sticking.</li> </ol>	<ol style="list-style-type: none"> <li>1. Activate valve a few times to free debris. Clean out any foreign material.</li> <li>2. Replace solenoid coil.</li> </ol>
Water continually leaking at connections.	<ol style="list-style-type: none"> <li>1. Loose water connections.</li> <li>2. Flare seal washer leaks.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten water connections.</li> <li>2. Replace flare seal washer.</li> </ol>
Water only dispensed, no syrup. Or syrup only dispensed, no water.	<ol style="list-style-type: none"> <li>1. Syrup BIB empty.</li> <li>2. Water or syrup shutoff on mounting block not fully open.</li> <li>3. Improper or inadequate water or syrup supply.</li> <li>4. CO<sub>2</sub> pressure to syrup pump too low.</li> <li>5. Stalled or inoperative BIB pump.</li> <li>6. Kinked line.</li> <li>7. CO<sub>2</sub> regulator malfunction.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace syrup BIB as required.</li> <li>2. Open shutoff completely.</li> <li>3. Remove valve from mounting block &amp; open shut offs slightly. Check water &amp; syrup supply. If no supply, check unit for other problems. Ensure BIB connection is engaged.</li> <li>4. Check the CO<sub>2</sub> pressure to the pump to ensure it is between 70-80 psi (0.483-0.552 MPa).</li> <li>5. Check CO<sub>2</sub> pressure and/or replace pump.</li> <li>6. Remove kink or replace line.</li> <li>7. Repair or replace CO<sub>2</sub> regulator as required.</li> </ol>
Syrup only dispensed. No water, but CO <sub>2</sub> gas dispensed with syrup.	<ol style="list-style-type: none"> <li>1. Improper water flow to dispenser.</li> <li>2. Carbonator pump motor has timed out.</li> <li>3. Liquid level probe not connected properly to PCB.</li> <li>4. Defective PCB assembly.</li> <li>5. Defective liquid level probe.</li> <li>6. Weak or defective carbonator pump.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for water flow to dispenser.</li> <li>2. Reset by turning the unit OFF, then ON by using the circuit breaker on the power supply or momentarily unplugging unit.</li> <li>3. Check connections of liquid level probe to PCB assembly.</li> <li>4. Replace PCB assembly.</li> <li>5. Replace liquid level probe.</li> <li>6. Replace pump.</li> </ol>
Excessive foaming.	<ol style="list-style-type: none"> <li>1. No ice in bin.</li> <li>2. Incoming water or syrup temperature too high.</li> <li>3. CO<sub>2</sub> pressure too high.</li> <li>4. Water flow rate too high.</li> <li>5. Nozzle and diffuser not clean.</li> <li>6. Air in BIB lines.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill bin with ice and allow cold plate to re-stabilize.</li> <li>2. Correct prior to dispenser.</li> <li>3. Adjust CO<sub>2</sub> pressure downward, but not less than 70 psi (0.483 MPa).</li> <li>4. Re-adjust and reset ratio.</li> <li>5. Remove and clean.</li> <li>6. Bleed air from BIB lines.</li> </ol>

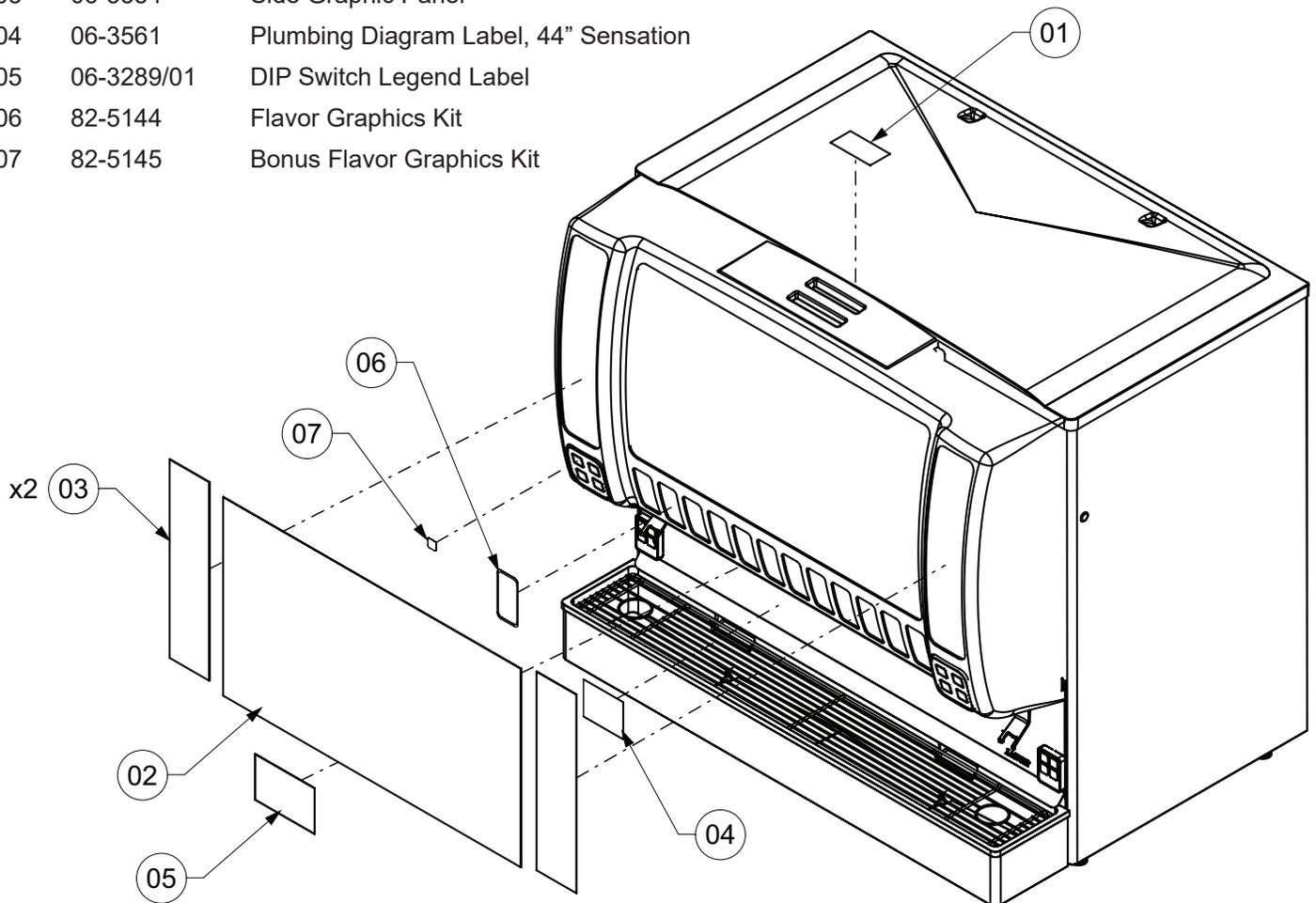
<b>TROUBLE</b>	<b>CAUSE</b>	<b>REMEDY</b>
Water only dispensed, no syrup. Or syrup only dispensed, no water.	<ol style="list-style-type: none"> <li>1. Syrup BIB empty.</li> <li>2. Water or syrup shutoff on mounting block not fully open.</li> <li>3. Improper or inadequate water or syrup supply.</li> <li>4. CO<sub>2</sub> pressure to syrup pump too low.</li> <li>5. Stalled or inoperative BIB pump.</li> <li>6. Kinked line.</li> <li>7. CO<sub>2</sub> regulator malfunction.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace syrup BIB as required.</li> <li>2. Open shutoff completely.</li> <li>3. Remove valve from mounting block &amp; open shut offs slightly. Check water &amp; syrup supply. If no supply, check unit for other problems. Ensure BIB connection is engaged.</li> <li>4. Check the CO<sub>2</sub> pressure to the pump to ensure it is between 70-80 psi (0.483-0.552 MPa).</li> <li>5. Check CO<sub>2</sub> pressure and/or replace pump.</li> <li>6. Remove kink or replace line.</li> <li>7. Repair or replace CO<sub>2</sub> regulator as required.</li> </ol>
Syrup only dispensed. No water, but CO <sub>2</sub> gas dispensed with syrup.	<ol style="list-style-type: none"> <li>1. Improper water flow to dispenser.</li> <li>2. Carbonator pump motor has timed out.</li> <li>3. Liquid level probe not connected properly to PCB.</li> <li>4. Defective PCB assembly.</li> <li>5. Defective liquid level probe.</li> <li>6. Weak or defective carbonator pump.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for water flow to dispenser.</li> <li>2. Reset by turning the unit OFF, then ON by using the circuit breaker on the power supply or momentarily unplugging unit.</li> <li>3. Check connections of liquid level probe to PCB assembly.</li> <li>4. Replace PCB assembly.</li> <li>5. Replace liquid level probe.</li> <li>6. Replace pump.</li> </ol>
Excessive foaming.	<ol style="list-style-type: none"> <li>1. No ice in bin.</li> <li>2. Incoming water or syrup temperature too high.</li> <li>3. CO<sub>2</sub> pressure too high.</li> <li>4. Water flow rate too high.</li> <li>5. Nozzle and diffuser not clean.</li> <li>6. Air in BIB lines.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill bin with ice and allow cold plate to re-stabilize.</li> <li>2. Correct prior to dispenser.</li> <li>3. Adjust CO<sub>2</sub> pressure downward, but not less than 70 psi (0.483 MPa).</li> <li>4. Re-adjust and reset ratio.</li> <li>5. Remove and clean.</li> <li>6. Bleed air from BIB lines.</li> </ol>
BIB pump does not operate when dispensing valve is opened.	<ol style="list-style-type: none"> <li>1. Out of CO<sub>2</sub>, CO<sub>2</sub> not turned on, or low CO<sub>2</sub> pressure.</li> <li>2. Out of syrup.</li> <li>3. BIB connector not tight.</li> <li>4. Kinks in syrup or gas lines.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace CO<sub>2</sub> supply, turn on CO<sub>2</sub> supply, or adjust CO<sub>2</sub> pressure to 70-80 psi (0.483-0.552 MPa).</li> <li>2. Replace syrup supply.</li> <li>3. Fasten connector tightly.</li> <li>4. Straighten or replace lines.</li> </ol>
BIB pump operating, but no flow.	<ol style="list-style-type: none"> <li>1. Leak in syrup inlet or outlet line.</li> <li>2. Defective BIB pump.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace line.</li> <li>2. Replace BIB pump.</li> </ol>
BIB pump continues to operate when bag is empty.	<ol style="list-style-type: none"> <li>1. Leak in suction line.</li> <li>2. Leaking o-ring on pump inlet fitting.</li> <li>3. Defective syrup BIB pump.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check BIB connector, if still leaking then replace line.</li> <li>2. Replace o-ring</li> <li>3. Replace defective pump.</li> </ol>
BIB pump fails to restart after bag replacement.	<ol style="list-style-type: none"> <li>1. BIB connector not on tightly.</li> <li>2. BIB connector is stopped up.</li> <li>3. Kinks in syrup line.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten BIB connector.</li> <li>2. Clean out or replace BIB connector.</li> <li>3. Straighten or replace line.</li> </ol>

TROUBLE	CAUSE	REMEDY
BIB pump fails to stop when dispensing valve is closed.	<ol style="list-style-type: none"> <li>1. Leak in discharge line or fittings.</li> <li>2. Empty BIB.</li> <li>3. Air leak on inlet line or bag connector.</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair or replace discharge line.</li> <li>2. Replace BIB.</li> <li>3. Repair or replace.</li> </ol>
Low or no carbonation.	<ol style="list-style-type: none"> <li>1. Low or no CO<sub>2</sub>.</li> <li>2. Low water pressure.</li> <li>3. Worn or defective carbonator pump.</li> <li>4. Backflow preventer not allowing water to flow.</li> <li>5. Probe malfunctioning.</li> <li>6. PCB malfunctioning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check CO<sub>2</sub> supply. Adjust CO<sub>2</sub> pressure to 70 psi (0.483 MPa).</li> <li>2. Need water booster kit.</li> <li>3. Replace carbonator pump.</li> <li>4. Replace backflow preventer, noting the flow direction arrow from pump to cold plate.</li> <li>5. Replace probe.</li> <li>6. Replace PCB.</li> </ol>

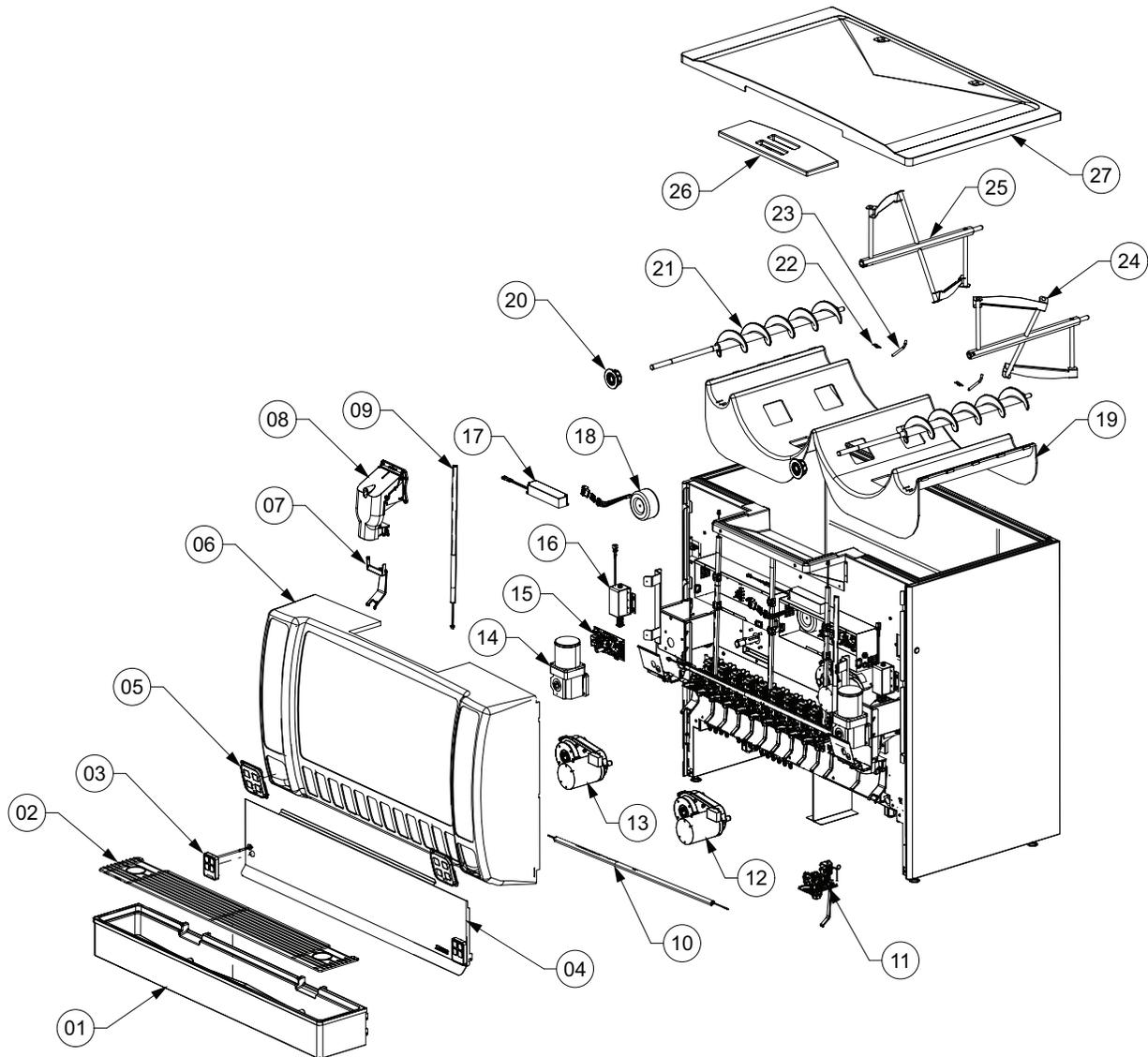
## ILLUSTRATIONS AND PART LISTINGS

### Graphics & Labels Assembly

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
01	06-2342/01	Electrical Hazard Warning Label
02	06-3553	Front Graphic Panel
03	06-3554	Side Graphic Panel
04	06-3561	Plumbing Diagram Label, 44" Sensation
05	06-3289/01	DIP Switch Legend Label
06	82-5144	Flavor Graphics Kit
07	82-5145	Bonus Flavor Graphics Kit



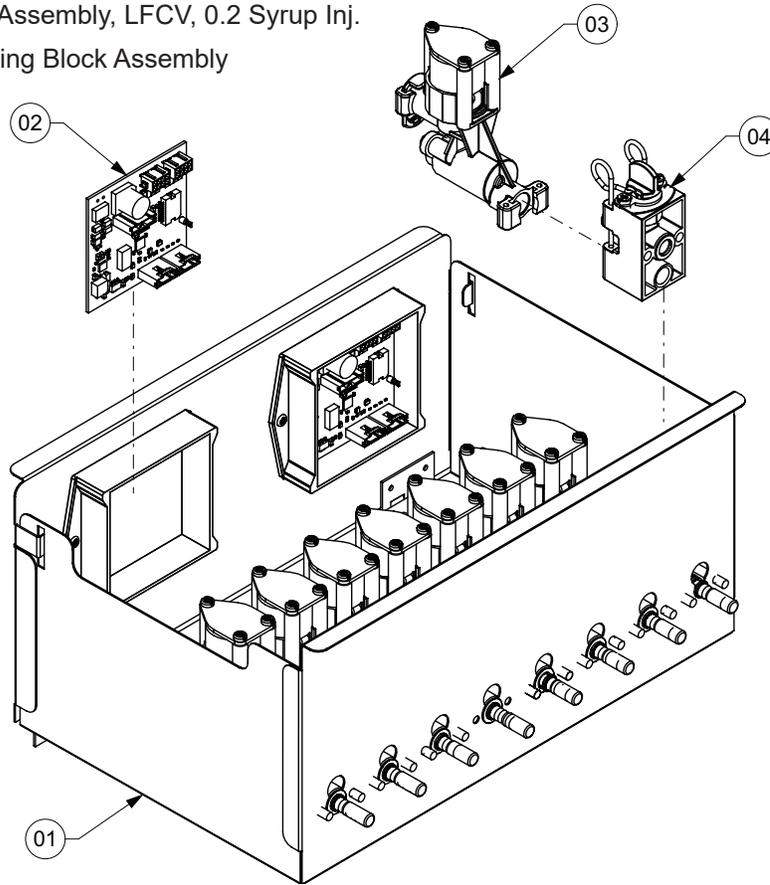
# Main Unit Assembly



<u>Item</u>	<u>Part No.</u>	<u>Description</u>
01	82-5207	Drip Tray, IBD44
02	23-1768	Cup Rest
03	52-3701	ADA Membrane Switch
04	30-12681	Splash Plate, 44" Sensation
05	52-3843	Flavor Shot Membrane Switch
06	05-3617	Merchandiser, 44" Sensation
07	05-0999/01	Ice Chute Lever
08	82-4450	Ice Chute Assembly, Sensation
09	12-0643	LED Light Bar, 18", 9.5 W, 24 VDC
10	12-0643	LED Light Bar, 30", 7.0 W, 24 VDC
11a	19-73310-L	LPV, 3.0 oz, SSL SVRC
11b	19-0120/03	LEV, 3.0 oz, SSL Valve
12	91-0198	Agitator Motor Assembly, CCW
13	82-5128	Agitator Motor Assembly, CW
14	82-4451	Auger Motor Assembly
15	64-5037/01	Ice Control PCB Assembly
16	82-4507	Solenoid Door Assembly
17	12-0652	LED Driver Ballast, 60 W
18	25-0094	Transformer, 155 VA, 22 VAC
19	05-3468	Ice Shroud, 44" Sensation
20	02-0406/01	Auger Motor Shaft Lock
21	82-4315/01	Pellet Ice Auger
22	03-0368	Agitator Retainer Pin
23	10-0762	Hex Design Pin
24	82-5051	Right Agitator Assembly
25	82-5063	Left Agitator Assembly
26	05-1476/01	Front Lid, IBD
27	05-3582	Ice Bin Lid, 44" Sensation

# Flavor Box Assembly

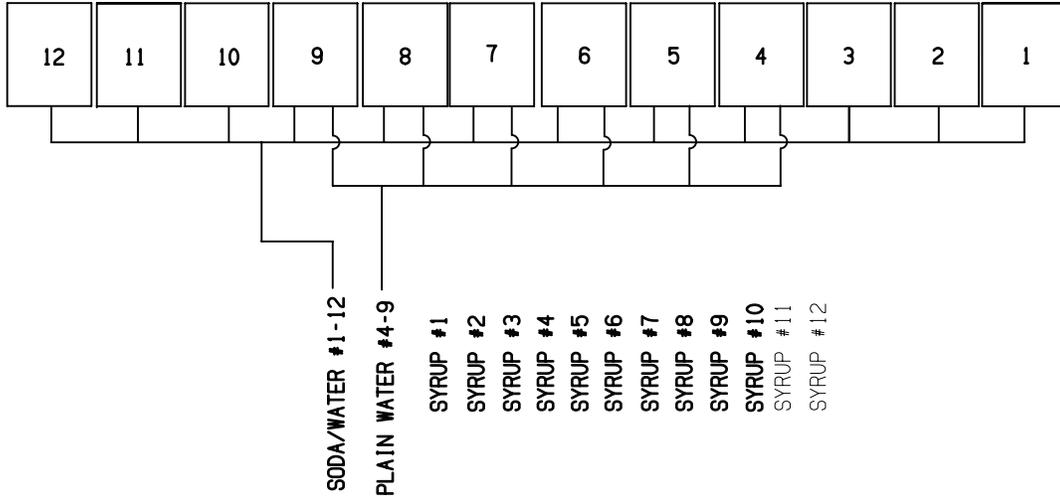
<u>Item</u>	<u>Part No.</u>	<u>Description</u>
01	82-5174	Flavor Shot Box Assembly, 44" Sensation
02	64-5123/01	PCB Assembly, Flavor Shot Control Box
03	19-0523	Valve Assembly, LFCV, 0.2 Syrup Inj.
04	82-2317/01	Mounting Block Assembly



# Unit Plumbing Diagram

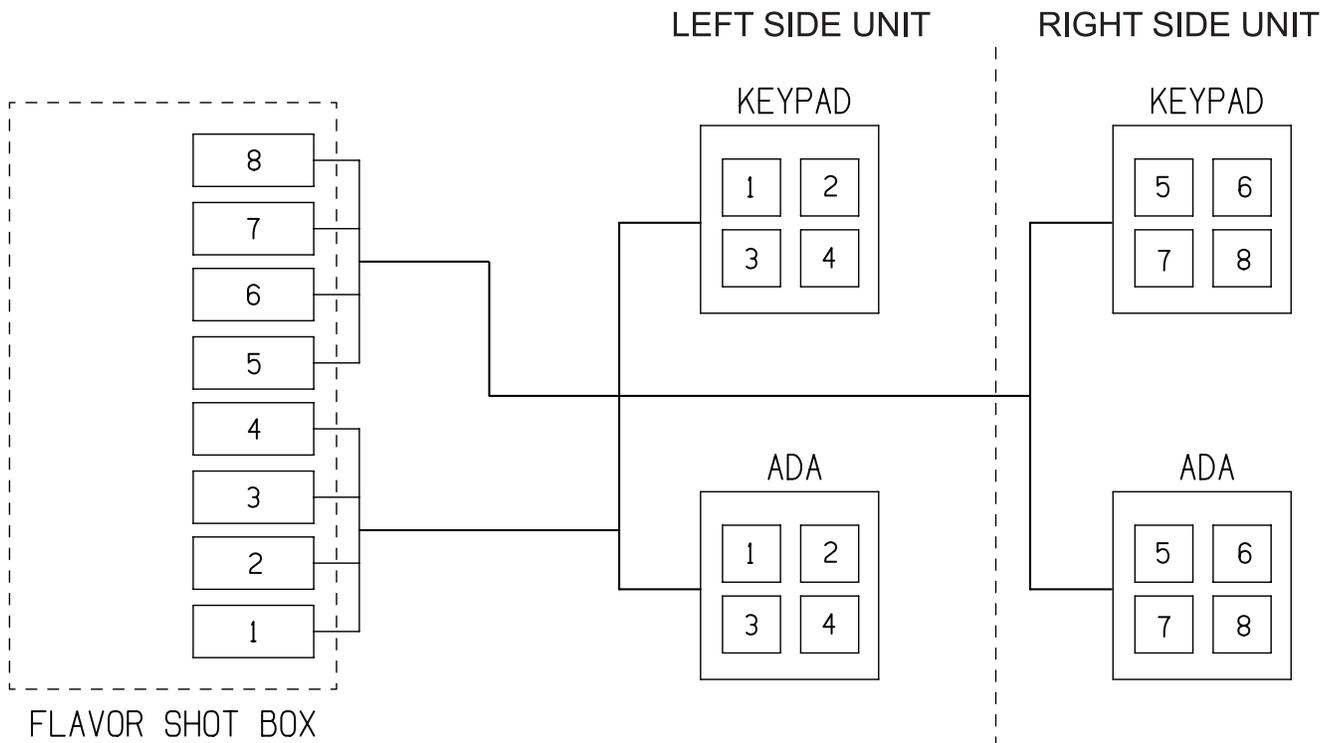
## LANCER

### RECOMMENDED PLUMBING



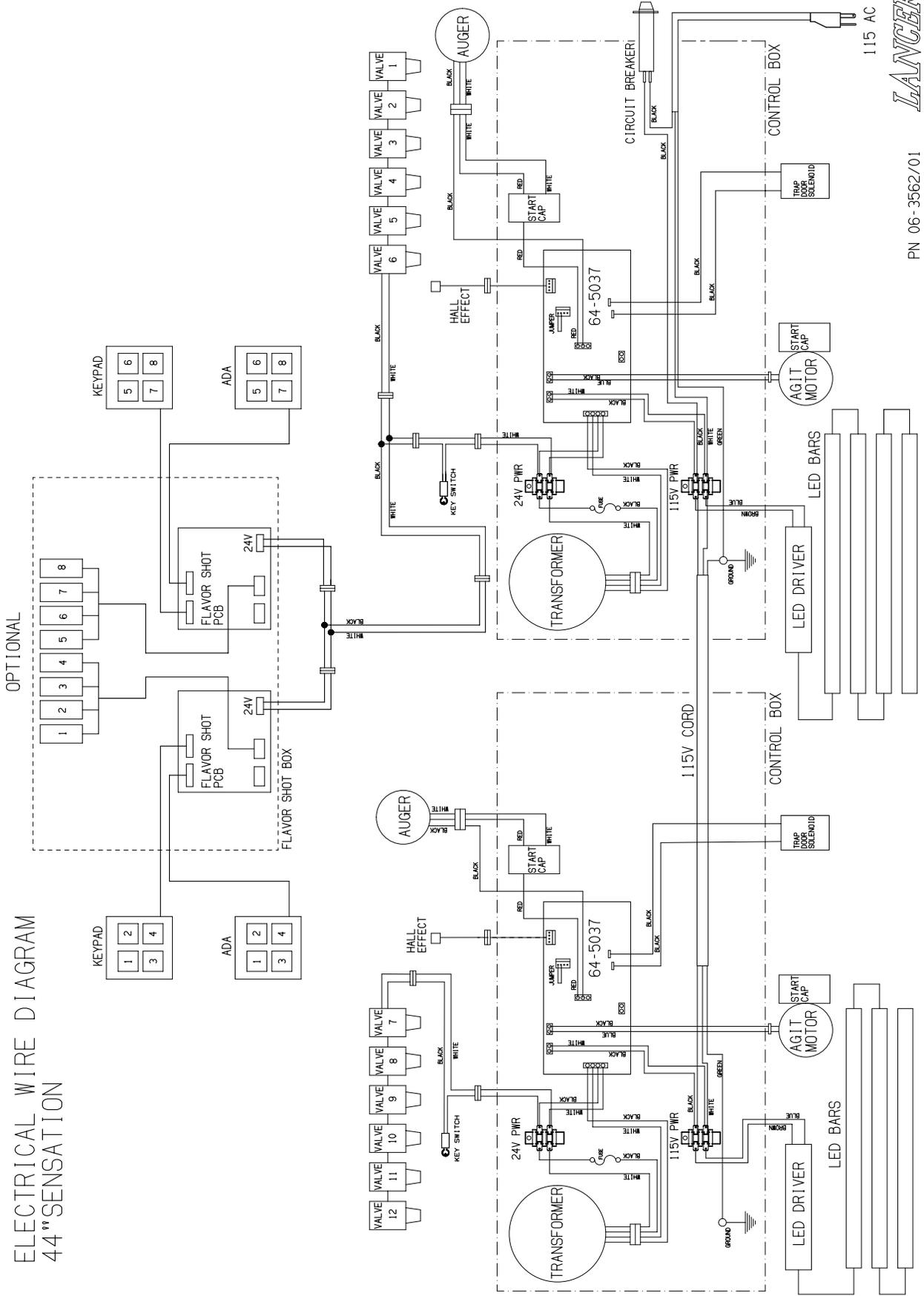
SYRUP LINES NOT SHOWN  
 FOR ASSISTANCE CALL 1-800-729-1500  
 PART NO: 06-3561

# Flavor Shot Box Plumbing Diagram



# Wiring Diagram - 115 Volt

## ELECTRICAL WIRE DIAGRAM 44" SENSATION



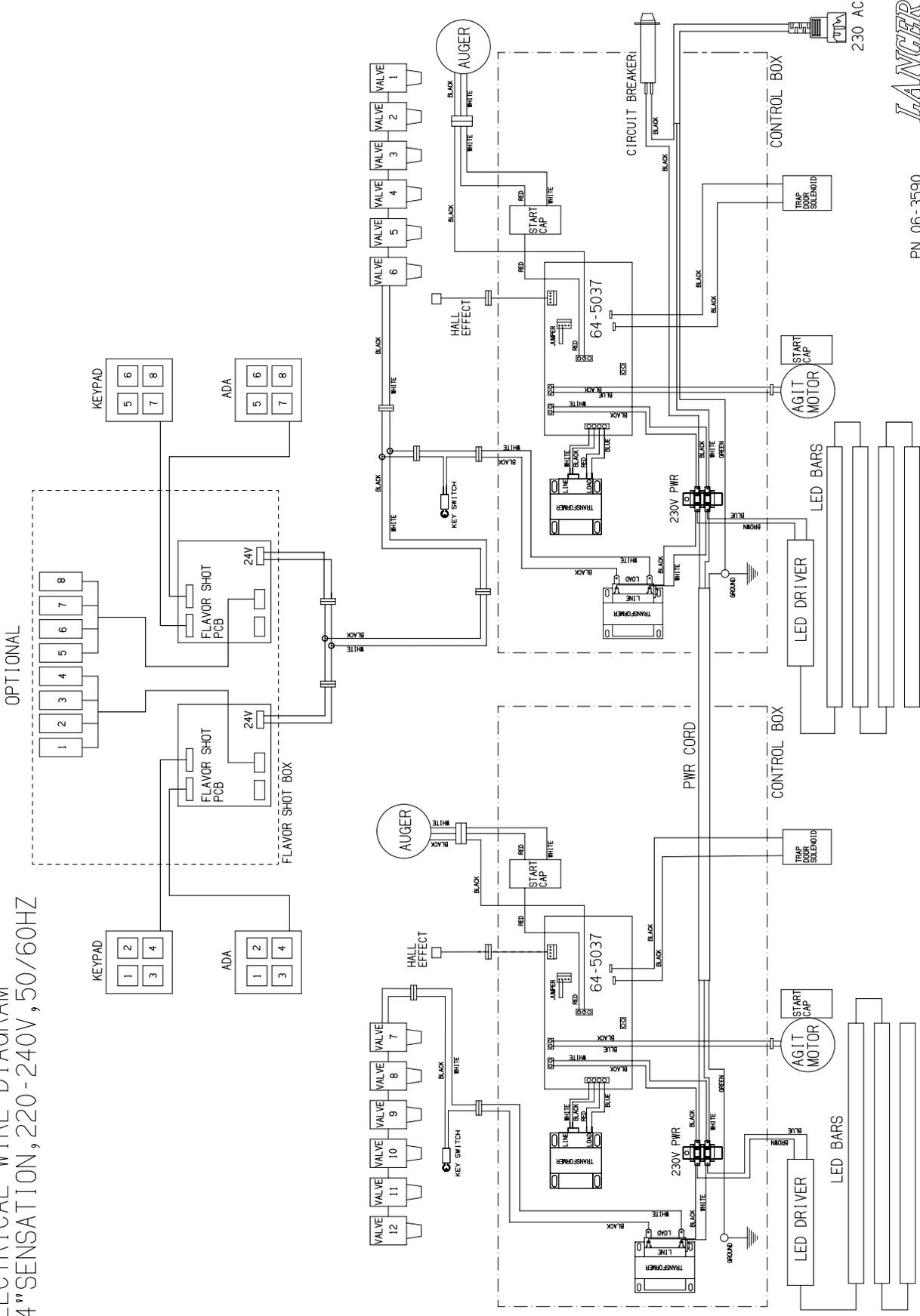
PN 06-3562/01

LANCER

115 AC

# Wiring Diagram - 220-240 Volt

ELECTRICAL WIRE DIAGRAM  
44" SENSATION, 220-240V, 50/60HZ



PN 06-3590

*LANNER*

# DIP Switch Legend

SW1

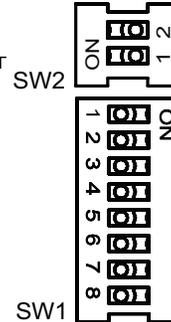
SWITCH #		AUTO AGITATE OFF TIME
3	4	
*OFF	OFF	NO AUTO AGITATION
OFF	ON	20 MINUTES
ON	OFF	40 MINUTES
ON	ON	60 MINUTES

SWITCH #		AGITATOR ON TIME
5	6	
OFF	OFF	11 SECONDS
OFF	ON	9 SECONDS
*ON	OFF	7 SECONDS
ON	ON	5 SECONDS

SWITCH #		AUGER RUN TIME
7	8	
OFF	OFF	6 SEC DISPENSED
OFF	ON	9 SEC DISPENSED
*ON	OFF	12 SEC DISPENSED
ON	ON	15 SEC DISPENSED

SW2 SWITCH 1: MUST BE ON FOR MODEL 4900  
 SW2 SWITCH 2: POSITION DOES NOT MATTER

SW1 SWITCH 1: NOT USED FOR MODEL 4900  
 SW1 SWITCH 2: NOT USED FOR MODEL 4900



LANCER PN: 06-3289/01

\*= DENOTES DEFAULT

SW1

## NOTE

If installing a Scotsman® Pellet icemaker, set the auto agitation time to every 60 minutes.

## Dispenser Disposal



To prevent possible harm to the environment from improper disposal, recycle the unit by locating an authorized recycler or contact the retailer where the product was purchased. Comply with local regulations regarding disposal of the refrigerant and insulation.

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***LANCER***<sup>®</sup>

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