



**FOR QUALIFIED INSTALLER ONLY.** This basic Installation Sheet is an initial release. If a complete Operations Manual (for the unit being installed) is required or needed, please refer to the Lancer web site ([lancercorp.com](http://lancercorp.com)) for immediate access, or for your convenience, scan this QR code with a mobile device (app required) for immediate access to other Technical Documents and alternative translations (if available) pertaining to this unit. Contact Lancer Customer Service for assistance as required.

### ABOUT THIS MANUAL

This booklet is an integral and essential part of the product and should be handed over to the operator after the installation and preserved for any further consultation that may be necessary. Please read carefully 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.

### 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.

***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.***

## IMPORTANT SAFETY INSTRUCTIONS

### ⚠ Intended Use

The dispenser is for indoor use only. This unit is not a toy. Children should not be supervised not to play with appliance. It 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. Cleaning and user maintenance shall not be performed by children without supervision. 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. Service, cleaning and sanitizing should be accomplished only by trained personnel. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

### ⚠ Automatic Agitation

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



### **⚠ Electrical Warning**

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. Follow all local electrical codes when making connections. 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. The keyswitch does not disable the line voltage to the transformer primary. 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. Make sure that all water lines are tight and units are dry before making any electrical connections!

### **⚠ 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.

### **⚠ 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 laws. 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) with the provided pressure regulator. 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. The water supply must be protected by means of an air gap, a backflow prevention device 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. Ensure the backflow prevention device complies with ASSE and local standards. It is the responsibility of the installer to ensure compliance.

## **SPECIFICATIONS & FEATURES**

### **DIMENSIONS**

*Width:* 44.0 inches (1118 mm)  
*Depth:* 31.1 inches (791 mm)  
*Height:* 39.4 inches (1000 mm)

### **WEIGHT**

*Shipping:* 585 lbs (265 kg)  
*Operating (w/ Ice):* 745 lbs (338 kg)  
*Ice Capacity:* 312 lbs (142 kg)

### **ELECTRICAL**

115 VAC / 60 Hz / 6.0 Amps

### **PLAIN WATER SUPPLY**

*Min Flowing Pressure:* 75 psi (0.516 MPa)

### **CARBONATED WATER SUPPLY**

*Min Flowing Pressure:* 75 psi (0.516 MPa)  
*Max Static Pressure:* 125 psi (0.862 MPa)

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

### **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  
*CO<sub>2</sub> Inlet:* 3/8 inch barb

## **READ THIS MANUAL**

This manual was developed by the Lancer Corporation as a reference for the owner/operator and installer of this dispenser. Please read this guide before installation and operation of this dispenser. If service is required please call your Lancer Service Agent or Lancer Customer Service. Always have your model and serial number available when you call.

**Your Service Agent:** \_\_\_\_\_

**Service Agent Telephone Number:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Model Number:** \_\_\_\_\_

# INSTALLATION

## Unpack the Dispenser

1. Set shipping carton upright on the floor then cut package banding straps and remove.
2. Open top of carton and remove interior packaging.
3. Lift carton up and off of the unit.
4. 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.

5. 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.

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

## Selecting/Preparing Counter Location

1. 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 2, and away from direct sunlight or overhead lighting.
2. 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).
3. 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.

4. Unit may be installed directly on counter-top or on legs. If installed directly on the counter, unit must be sealed to the countertop 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 use legs provided.

5. Select a location for the remote pump deck, syrup pumps, CO<sub>2</sub> tank, syrup containers, and water filter (recommended).
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)

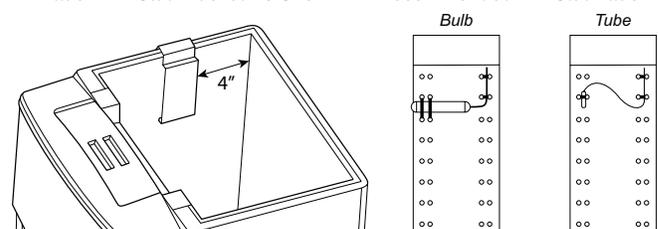
### ⚠ ATTENTION

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 above). 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.

Attach Bin Stat Bracket As Shown

Recommended Bin Stat Attachment



**⚠ 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.

**NOTE**

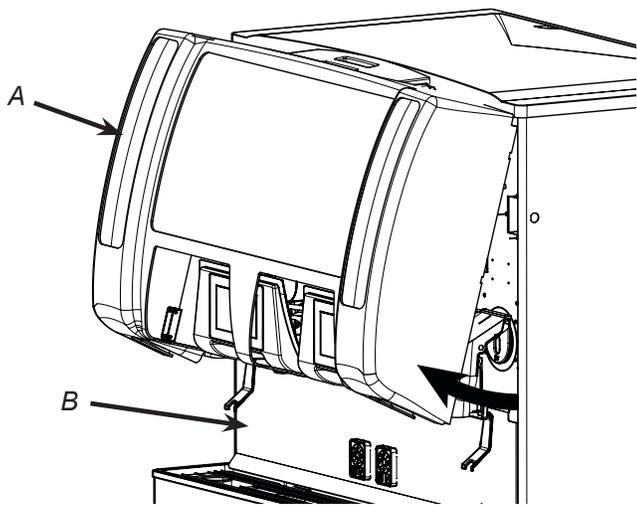
If installing a Scotsman® icemaker, Lancer recommends setting the auto agitation time to every 60 minutes. To adjust the agitation time, set the dip switches located in the control box behind the merchandiser. See the DIP Switch Legend diagram on page 19 of this manual for reference.

**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.

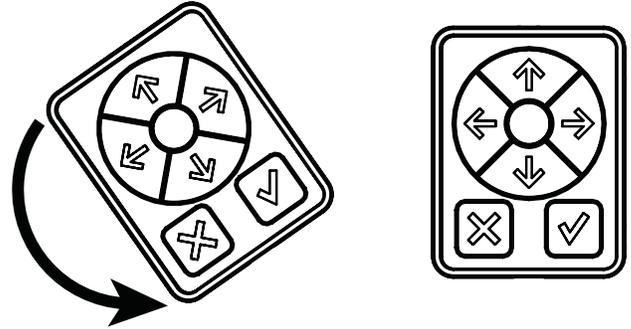
1. To remove the merchandiser, first detach the left and right side from the connection tabs behind the merchandiser, by pulling away from the unit.



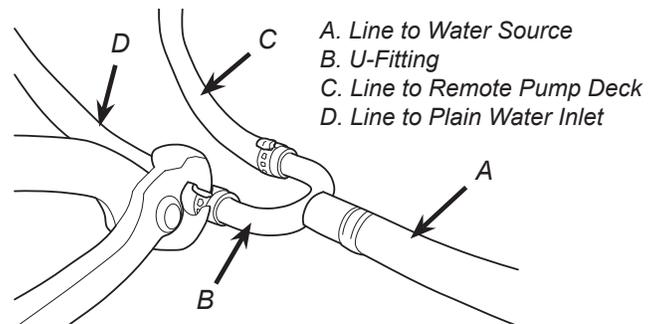
A. Merchandiser  
B. Splash Plate

2. Rotate the merchandiser, away from the unit, from the bottom then lift the merchandiser straight up to detach from the top of the ice bin and remove from the unit.

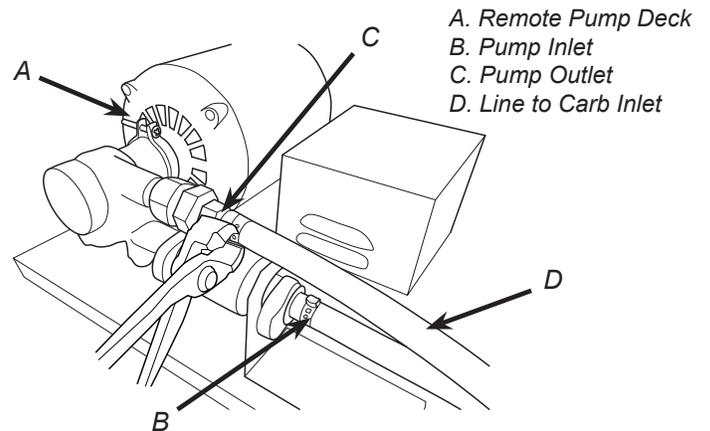
3. Twist/Rotate the ADA panel, located on the unit's splash plate, in a counterclockwise direction up to a 45° angle.



4. Carefully pull ADA panel and electric wire harness from the unit's splash plate, until the harness connector is visible.
5. Disconnect ADA harness and remove from the unit. Repeat Steps 3-4 for second ADA panel.
6. Remove the splash plate and drip tray.
7. Route appropriate tubing from the water source to the water inlet at the remote pump deck.
8. If necessary, install water booster (Lancer PN MC-163172) between water supply and the remote pump deck.
9. Using tubing cutters, cut the water line and install U-fitting then route appropriate tubing from the U-fitting to the plain water inlet at the unit.

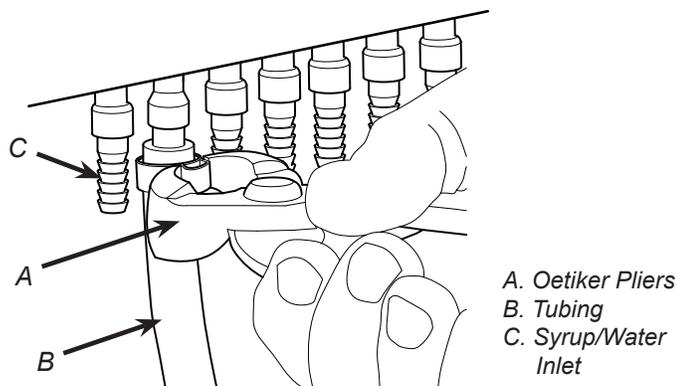


10. Route appropriate tubing from the remote pump deck outlet to the carbonated water inlet at unit.



11. Install a shut-off valve in the water line feeding the remote pump deck as well as the water line feeding the plain water inlet.

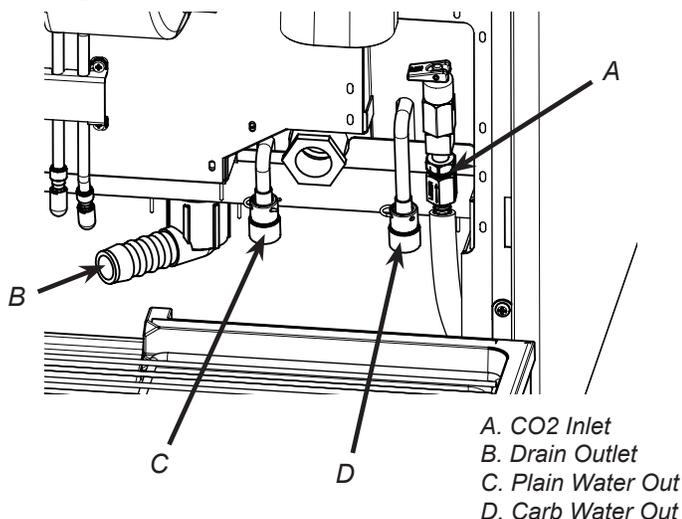
- Route appropriate tubing from the syrup pump location to the syrup inlets and connect tubing to all syrup inlets.



**NOTE**

See Plumbing Diagrams on the front of the unit or on page 17 for reference.

- 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.

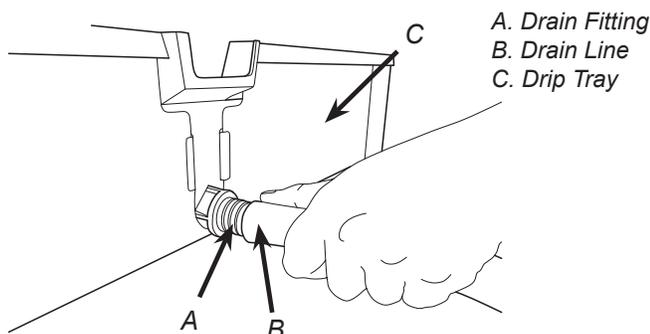


- Route the power supply cord to a grounded electrical outlet of the proper voltage and amperage rating.

**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 both drain hoses from designated open type drain to both fittings on Drip Tray and connect hose to fittings. (if applicable)



**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 luke 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. (if applicable)

**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.

**Connecting to Remote Dispenser (if necessary)**

**NOTE**

This unit has the ability to supply a remote dispenser with chilled water and carbonated water lines. Please see the manufacturer's specifications and instructions for installation of the remote dispenser. The following are the instructions for plumbing the water lines to the remote dispenser.

- Connect appropriate tubing to the carbonated water outlet on the right side of the unit and route to the carbonated water inlet on the remote dispenser.

**NOTE**

See Plumbing Diagrams on the front of the unit or on page 17 for reference.

- Connect appropriate tubing to the plain water outlet on the right side of the unit and route to the plain water inlet on the remote dispenser.

**NOTE**

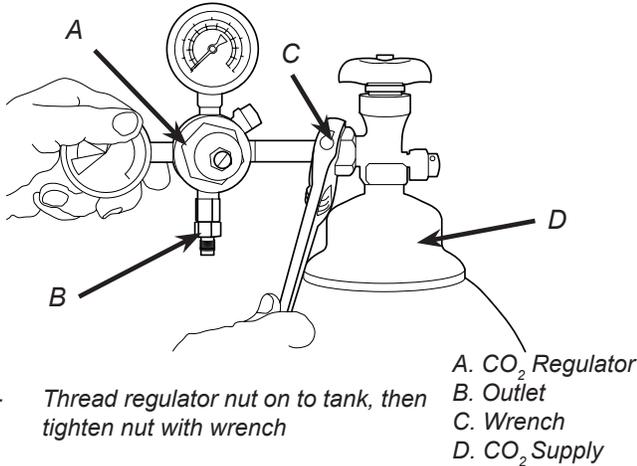
Water lines feeding the remote dispenser must be insulated.

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

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

### ⚠ ATTENTION

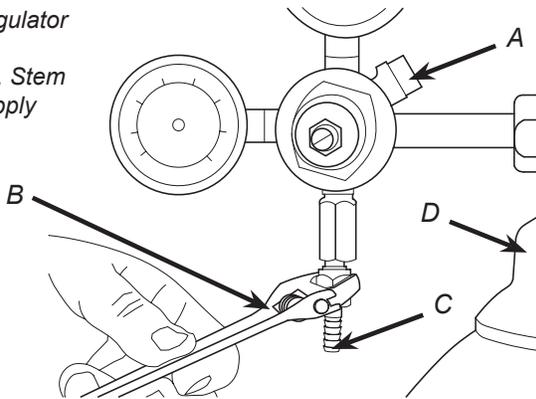
Before installing regulator, assure that a seal (washer or o-ring) is present in regulator attachment nut.



- Thread regulator nut on to tank, then tighten nut with wrench

2. Connect a 3/8" nut, stem and seal to CO<sub>2</sub> regulator outlet.

- A. CO<sub>2</sub> Regulator  
B. Wrench  
C. 3/8" nut, Stem  
D. CO<sub>2</sub> Supply

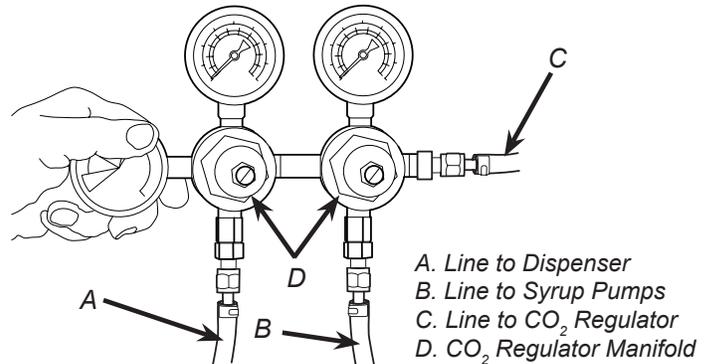


3. Route appropriate tubing from the low pressure CO<sub>2</sub> regulator manifold location to the 3/8" nut, stem on the high pressure CO<sub>2</sub> regulator attached to source and connect tubing.

### ⚠ 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.

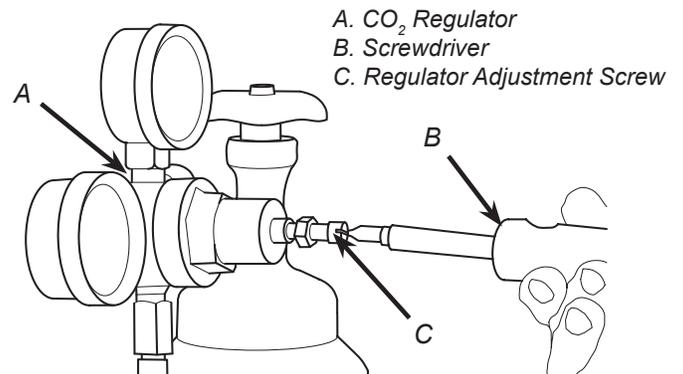
4. Connect tubing routed from the CO<sub>2</sub> inlet at the unit to one of the low pressure CO<sub>2</sub> regulator manifold outlets.
5. Connect tubing routed from the tee at the syrup pumps to the second low pressure regulator.



6. 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

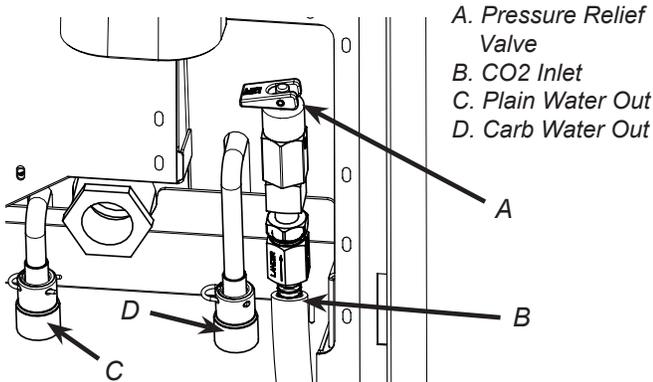
DO NOT TURN ON CO<sub>2</sub> SUPPLY AT THIS TIME



7. 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

1. Turn on water source.
2. 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.

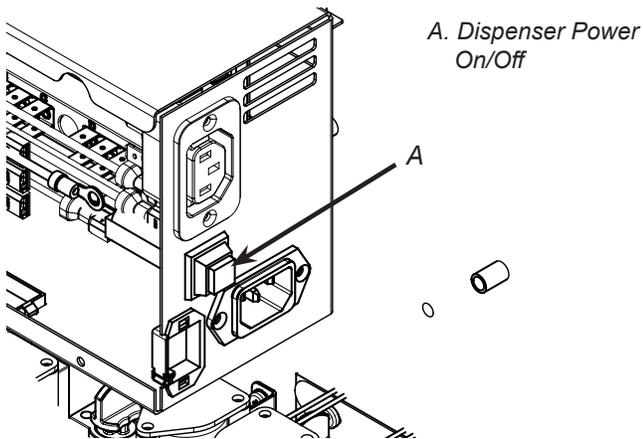


3. Verify all Bag-In-Box contains syrup and check all connections for leaks.
4. Place enough ice in the ice bin to fill approximately 1/2 of the bin before plugging in the unit.
5. Connect unit power cord to grounded electrical outlet.

### ⚠ 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.

6. Turn on the power to the dispenser by pressing the on/off toggle button on the right side of the unit electrical box.



7. Test the motor operation by pushing both ice chute levers until agitator motor begins to turn.
8. If necessary, turn on the left and right screen by pressing the screen on/off toggle buttons on the left side of the unit electrical box.

9. Once the screen has booted up, access the service menu by placing your finger at the right side edge of the screen.
10. In one swift, fluid motion slide your finger along the center of the screen to the left till you reach the left edge of the screen, then hold your finger to the screen for a minimum of four (4) seconds.



11. After you have held your finger for a minimum of four (4) seconds, tap all four corners of the screen in any order.

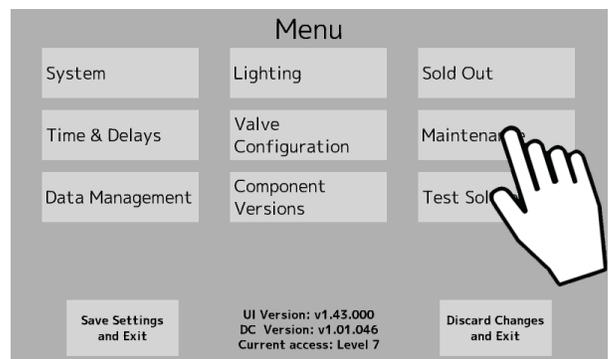


12. A keypad will appear, enter the designated pin number to access the service menu.
13. For manager's access to the service menu, repeat steps 10 - 11 and enter the manager's pin number (6655).

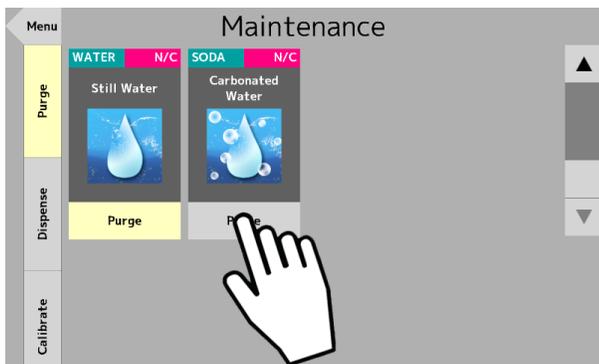
### NOTE

The manager's access to the service menu allows access to the Lighting screen (see page 12), the Sold Out screen (See page 13), and the Time & Delays screen (See page 12).

14. For access to only the Sold Out Menu, repeat steps 10 - 11 and enter the Sold Out pin (963.).
15. From the service menu press the Maintenance button.



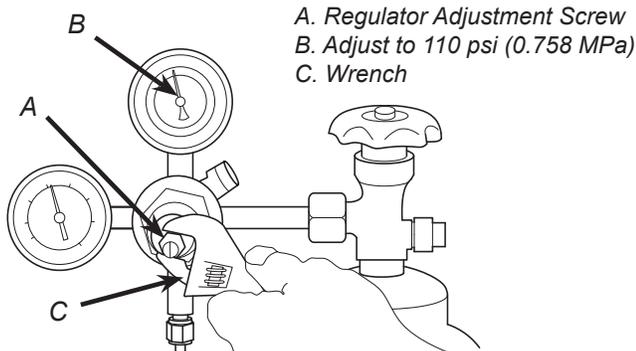
- Press the *Purge* tab on the far left side of the screen.
- Scroll down to the water modules and press the *Purge* buttons for both the plain water and the carbonated water modules.



**NOTE**

Once the purge is activated, it will continue to dispense product until it is deactivated. To deactivate the purge, simply press the *Purge* button again. Up to four modules can be purged at one time. Once four modules are selected, all other modules are greyed out and cannot be selected.

- Once a steady flow of water is achieved, press the *Purge* button again to deactivate the modules.
- Repeat steps 10 - 18 for the second screen.
- Make sure the 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.



A. Regulator Adjustment Screw  
 B. Adjust to 110 psi (0.758 MPa)  
 C. 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.

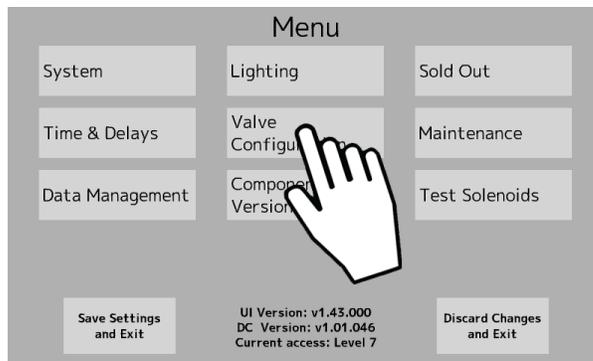
**NOTE**

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.

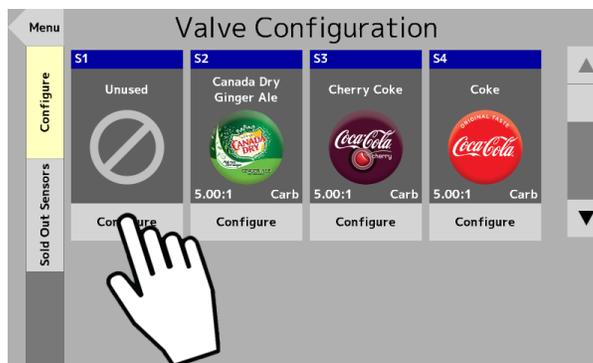
- Activate each valve to purge air from the syrup lines.

**Adding New Brand/Flavor Modules**

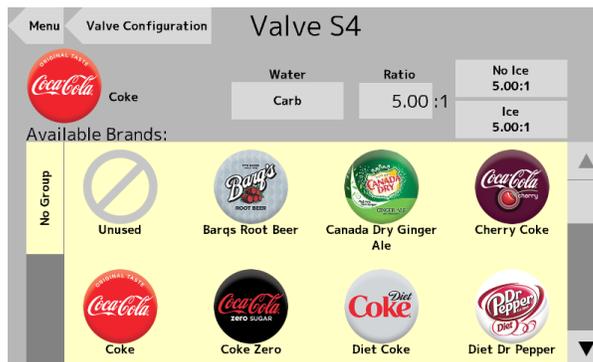
- In order to add a new brand or flavor module, the module must first be activated.
- From the Service menu, press the *Valve Configuration* button.



- From the Valve Configuration menu, press the *Configure* tab on the far left side of the screen.
- Press the *Configure* button under any brand or flavor module to open its Configuration Page.



- Select a new brand from the available Brands Library tabs on the left side of the screen.



## NOTE

Each brand has a default water type and ratio already set when they are selected. The water type and ratio can be adjusted if necessary, however, adjusting the ratio here is purely representational and does not set the ratio for the finished drink. Adjust the ratio by selecting the Ice or No Ice ratio using the buttons in the upper right corner of the screen, or by manually adjusting the ratio by tapping the number and entering the new value on the keypad.

- Once a brand/flavor has been selected to a corresponding module, press the *Valve Configuration* button to return to the Valve Configuration Screen.
- Repeat Steps 4 and 5 for any of the other brand or flavor modules.
- Press the Menu button to return to the Service menu.



- From the Service Menu, press the Maintenance button.
- Press the Purge tab on the far left side of the screen.
- Purge any new brand or flavor module until there is a steady flow of syrup. (See previous page)

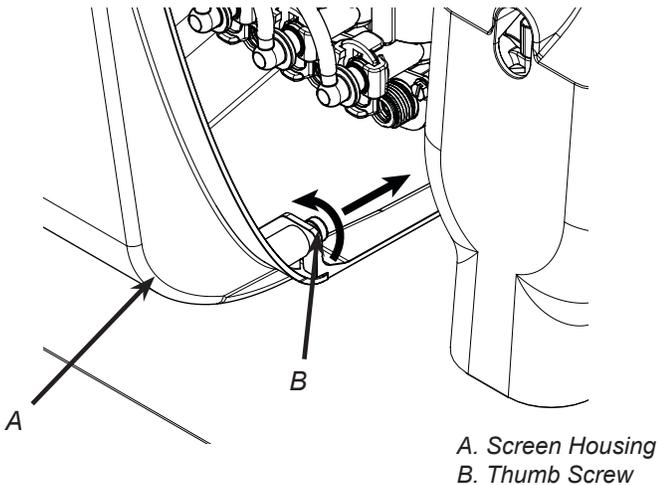


- Press the Menu button to return to the Service Menu.
- Repeat steps 1 - 12 for the second screen.

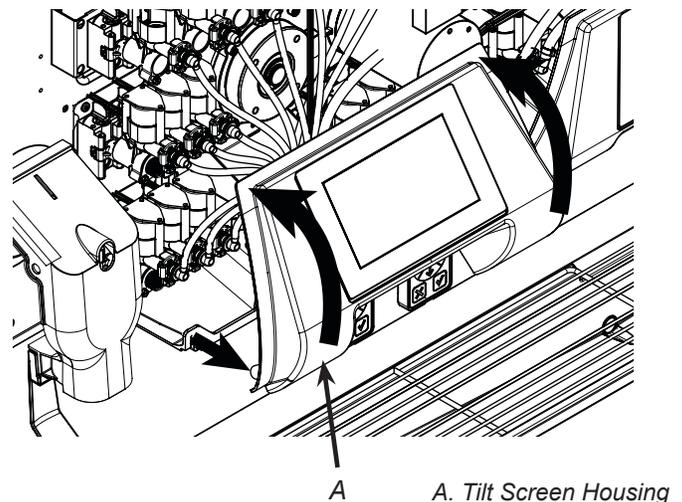
## CALIBRATION & MAINTENANCE

### Calibrating Plain/Carbonated Water Modules

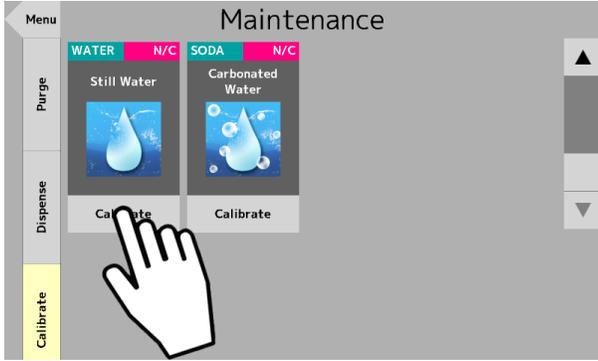
- Access the Service menu (See page 7) and press the *Maintenance* button.
- Remove the two thumb screws connecting the plastic screen housing to the unit.



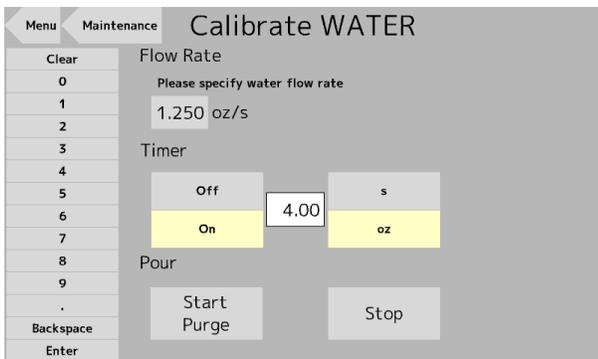
- While holding the plastic screen housing, tilt the housing forward until the housing disengages from the unit.



- While holding the screen housing, press the *Calibrate* tab on the far left side of the screen and press the *Calibrate* button for the plain water module.



- Using the keypad, enter a water flow rate value of 1.25 oz/sec.
- Set the Timer to the ON position and select ounces (oz) as the desired unit of measurement.

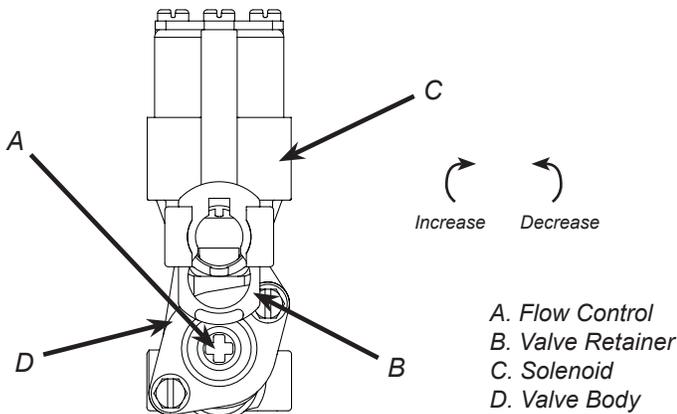


- Using the keypad, enter a specific volume to be dispensed based on the size of the graduated cylinder being used to calibrate the plain water module.

**NOTE**

The larger the volume dispensed, the more accurate the results.

- With a graduated cylinder placed in a position below the nozzle, press the *Start Purge* button. The unit will dispense the volume designated in the previous step.
- Examine the dispensed volume in the graduated cylinder. If the dispensed volume does not match the value entered on the screen in step 7, use a screwdriver to adjust the plain water flow control. (See Plumbing Diagram on page 17 for reference).

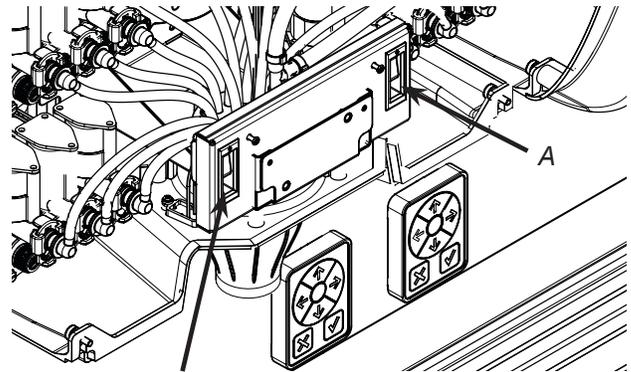


A. Flow Control  
B. Valve Retainer  
C. Solenoid  
D. Valve Body

- Repeat steps 8 and 9 until the designated volume is achieved.
- Repeat steps 5 - 10 for the carbonated water module.
- To re-attach the screen housing, first align the screen housing with the connection tabs on the unit, then rotate the housing down until the connection tabs engage.

**NOTE**

Make sure both of the connection tabs are disengaged in the open position before attempting to re-connect the screen housing. Use a screw driver to open the connection tabs if necessary.



A. Clip in Open Position

- Re-connect the two thumb screws removed in Step 2.
- Repeat steps 1 -13 for the second screen.

**Calibrating Brand Syrup Modules**

**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.

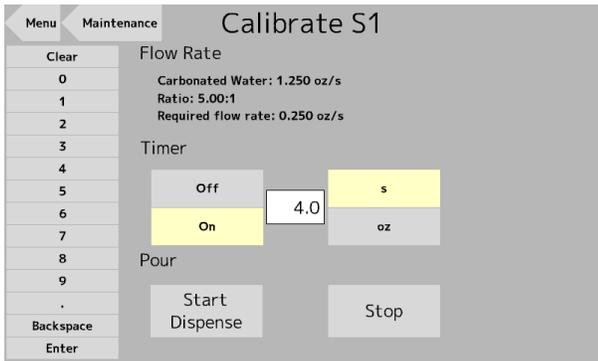
- From the Service menu, press the *Maintenance* button.
- Remove the two thumb screws connecting the plastic screen housing to the unit (See page 9).
- While holding the plastic screen housing, tilt the housing forward until the housing disengages from the unit (See page 9).
- While holding the screen housing, press the *Calibrate* tab on the far left side of the screen and press the *Calibrate* button for the first brand syrup module.

**NOTE**

The water flow rate should be set from the calibration of the carbonated/plain water modules in the previous section and the ratio should be determined from when the brand was configured. (See page 8, Adding New Brand/Flavor Module)



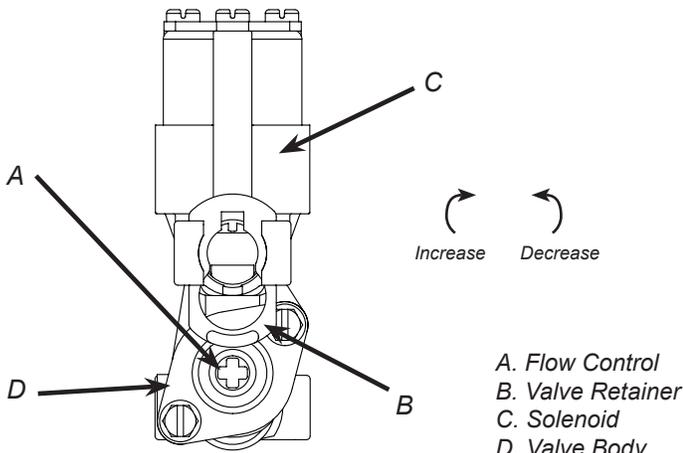
- Set the Timer to the ON position and select seconds (s) as the desired unit of measurement.
- Using the keypad, enter in a time of 4 seconds as the preset dispensing time.



**NOTE**

The finished drink flow rate was set to 1.5 oz/sec, which makes the finished syrup flow rate 0.25 oz/s. In 4 seconds, the volume of syrup that should be dispensed is 1.00 oz.

- With the graduated cylinder placed in a position below the nozzle, press the *Start Dispense* button. The unit will dispense the designated syrup for 4 seconds.
- Examine the dispensed volume in the graduated cylinder. If the dispensed volume does not match the value of 1.00 oz, use a screwdriver to adjust the brand syrup flow control. (See Plumbing Diagram on page 17 for reference).



- Repeat steps 7 and 8 until the designated volume of 1.00 ounce is achieved.

- Repeat steps 4 - 9 for the remaining brand syrup modules.
- To re-attach the screen housing, first align the screen housing with the connection tabs on the unit, then rotate the housing down until the connection tabs engage.

**NOTE**

Make sure both of the connection tabs are disengaged in the open position before attempting to re-connect the screen housing. Use a screw driver to open the connection tabs if necessary.

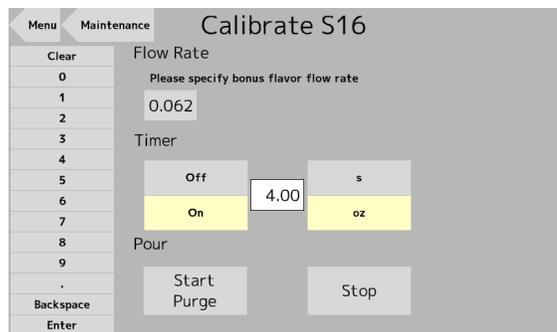
- Re-connect the two thumb screws removed in Step 2.
- Repeat steps 1 -12 for the second screen.

**Calibrating Flavor Syrup Modules**

- Access the Service menu (See page 7) and press the *Maintenance* button.
- Remove the two thumb screws connecting the plastic screen housing to the unit (See page 9).
- While holding the plastic screen housing, tilt the housing forward until the housing disengages from the unit (See page 9).
- While holding the screen housing, press the *Calibrate* tab on the far left side of the screen and press the *Calibrate* button for any designated flavor module.



- Using the keypad, enter a flow rate value of 0.062 oz/sec.
- Set the Timer to the ON position and select ounces (oz) as the desired unit of measurement.

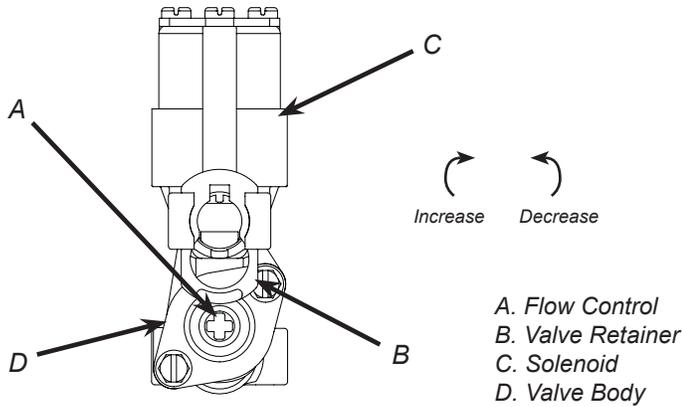


- Using the keypad, enter a specific volume to be dispensed based on the size of the graduated cylinder being used to calibrate the flavor module.

**NOTE**

The larger the volume dispensed, the more accurate the results.

- With the graduated cylinder placed in a position below the nozzle, press the Start Purge button. The unit will dispense the volume designated in the previous step.
- Examine the dispensed volume in the graduated cylinder. If the dispensed volume does not match the value entered on the screen in step 7, use a screwdriver to adjust the carbonated water flow control. (See Plumbing Diagram on page 17 for reference).



- Repeat steps 8 and 9 if any more bonus flavor flow adjustment is necessary.
- Repeat steps 4 - 10 for any remaining bonus flavor module.
- To re-attach the screen housing, first align the screen housing with the connection tabs on the unit, then rotate the housing down until the connection tabs engage.

#### NOTE

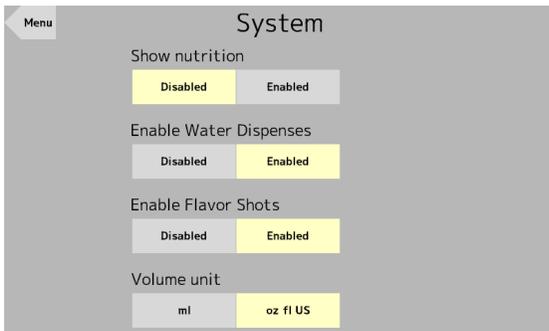
**Make sure both of the connection tabs are disengaged in the open position before attempting to re-connect the screen housing. Use a screw driver to open the connection tabs if necessary.**

- Re-connect the two thumb screws removed in Step 2.
- Repeat steps 1 -13 for the second screen.

## FEATURES OF THE FS44 SENSATION

### System Settings

- From the Service menu, press the *System* button.



- Press the *Enabled* button, below the “Enable Water Dispenses” heading, to have the ability to pour plain/ carbonated water from the main screen.



- Press the *Enabled* button, below the “Enable Flavor Shots” heading, to have the ability to pour flavor shots from the main screen.



- Press the *Enabled* button, below the “Show Nutrition” heading, to have the ability to display a selected brands nutrition information (if available).
- When enabled, press and hold the *Info* button from a selected brands pour screen to display the nutrition information.

## Time & Delay Features

1. From the Service Menu, press the *Time & Delays* button to access the Time & Delays Menu.
2. Enable or Disable any of the three (3) time & delay functions by tapping underneath their designated function names: *Brand Timeout*, *Screen Saver*, and *Sleep*.

### NOTE

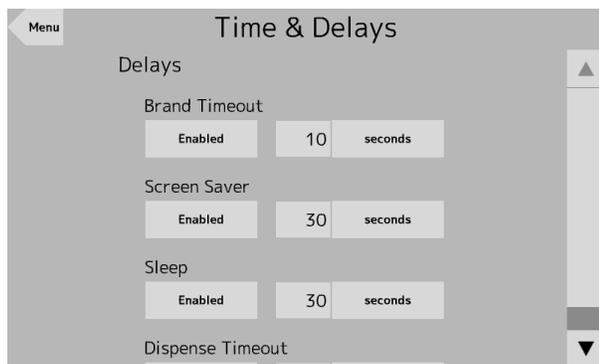
**Brand Timeout** - the amount of time for a selected brand on the Pour Screen to be deselected after inactivity

**Screen Saver** - the amount of time for the screen saver to be initiated after inactivity

**Sleep** - the amount of time for the unit to enter Sleep Mode after inactivity.

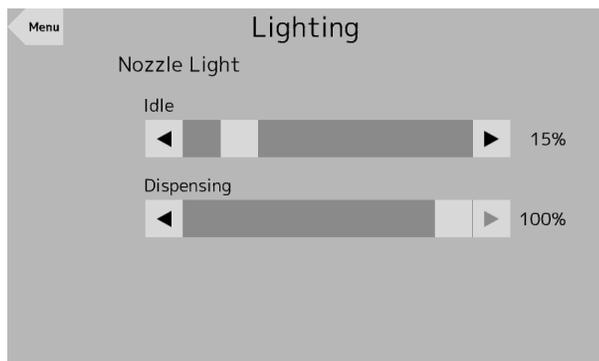
**Dispense Timeout** - the amount of time a valve will pour before automatic shutoff.

3. Adjust the *Frequency* and *Units of Time* by selecting their corresponding fields.



## Lighting Features

1. From the Service menu, press the *Lighting* button.
2. From this menu, the user can adjust the *Nozzle Light* when the unit is dispensing and when the unit is not dispensing (Idle).



## Sold Out Features

1. From the Service Menu, press the *Sold Out* button.
2. Manually adjust specific brands to read *Ready*, *Out*, or *Auto*

### NOTE

**Ready** - signifies there is available product and the valve will dispense when activated

**Out** - signifies there is no available product or there is a problem with the specified brand and will dispense when activated.

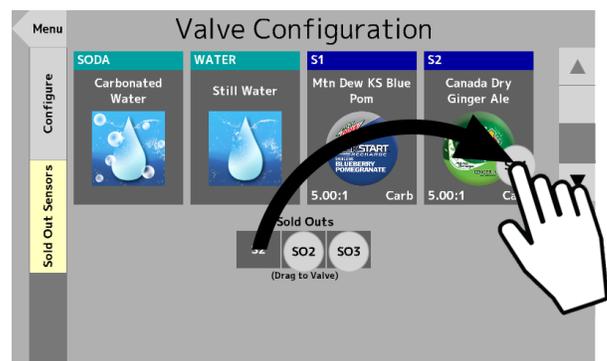
**Auto** - signifies that the configured Sold Out Sensor controls whether the brand can be dispensed. This feature requires an optional sold out sensor kit, does not come standard, and is available for up to ten (10) brands at one time. The following is a set of instructions on how to set up this feature. If no sold out sensor is assigned then the Auto feature acts the same as the Ready feature.



3. From the Service Menu, press the *Valve Configuration* button.
4. To add the Auto Sold Out feature to a specific brand, press and hold one of the Sold Out Sensors and drag them to a corresponding brand.

### NOTE

This feature will automatically shut-off the pump for that specific brand when there is no product to be dispensed. This feature only comes into effect when the corresponding brand is changed to "Auto" in the Sold-Out menu.



### NOTE

If a Sold Out Sensor is utilized for the CO<sub>2</sub> low section then a CO<sub>2</sub> Low Pressure Indicator will appear whenever the unit or a valve is not receiving enough CO<sub>2</sub>.

5. Press the *Menu* button to return to the Service Menu.

# 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.

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 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.

## Nozzle Sanitizing Solution

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

## 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 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 page15.</li> </ul>

## Every Six Months

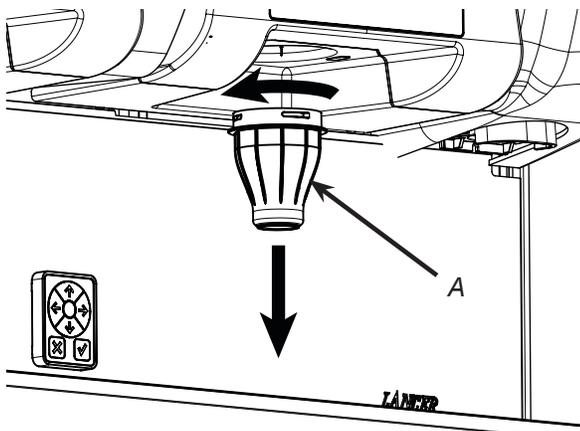
- Clean the syrup lines as specified by the section “Cleaning and Sanitizing Syrup Lines - Bag in Box” on page 16.
- Pull out unit (if applicable) and clean behind and underneath. Check for any loose components or noises.

## Cleaning & Sanitizing Nozzles

1. Prepare the nozzle sanitizing solution as described on the previous page.
2. Turn the left and right key switches to deactivate valves and avoid accidental dispense while the nozzles are exposed.
3. Remove the outer nozzle by twisting clockwise and pulling downward.

### ⚠ ATTENTION

**DO NOT** attempt to activate any valves while the outer nozzle is removed.



A. Nozzle

4. Using the nozzle brush provided in the installation kit and the cleaning solution described on page 18, clean the outer nozzle of any residual syrup.
5. Rinse the outer nozzle with clean, potable water then soak in the nozzle sanitizing solution prepared in step 1.
6. While the outer nozzle is in the sanitizing solution, using the nozzle brush, dip the brush in the nozzle sanitizing solution and thoroughly brush the bottom of the inner nozzle body.
7. Rinse the brush in warm 90° – 110°F (32.2°– 43.3°C), clean potable water and brush the bottom of the inner nozzle body once more **WITHOUT** the sanitizing solution.
8. After the outer nozzle has soaked for fifteen (15) minutes, rinse in warm 90° – 110°F (32.2°– 43.3°C), clean potable water for a minimum of twenty (20) seconds ensuring all surfaces of the nozzle have been thoroughly rinsed.
9. Allow outer nozzle to air dry (to expedite drying, forced convection is recommended).
10. Reinstall the outer nozzle to the unit.
11. Repeat Steps 3 - 10 for the second nozzle.
12. Return the left and right key switches to active valves.

## Cleaning & 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 on page 14. 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 the first page of this manual.

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

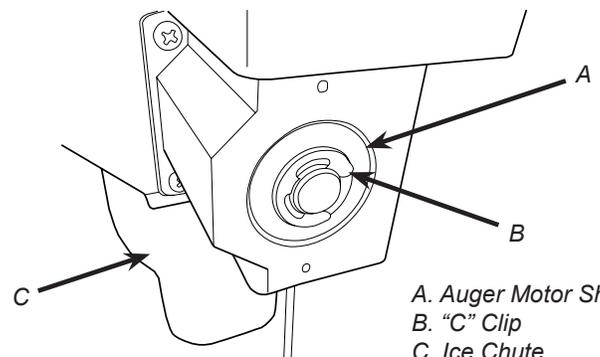
Always remove the ice chute lever before removing the splash plate.

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

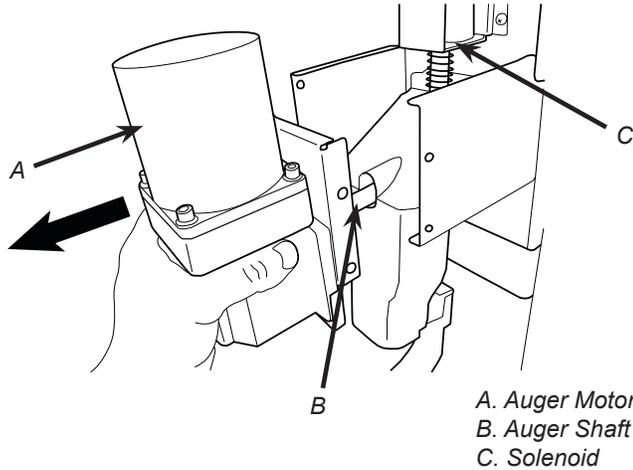
**DO NOT** disconnect flavor lines from nozzle, when removing from bracket.

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

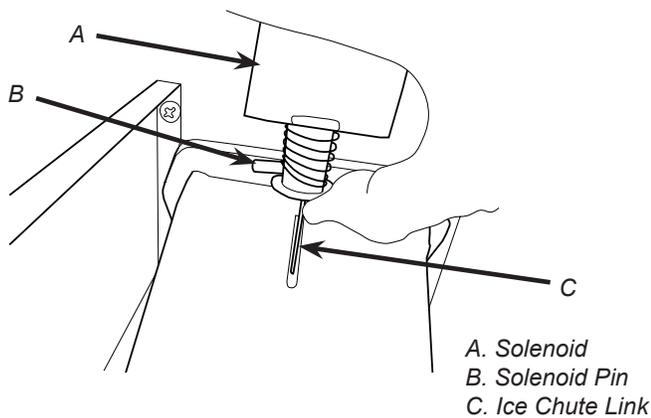


A. Auger Motor Shaft  
B. “C” Clip  
C. Ice Chute

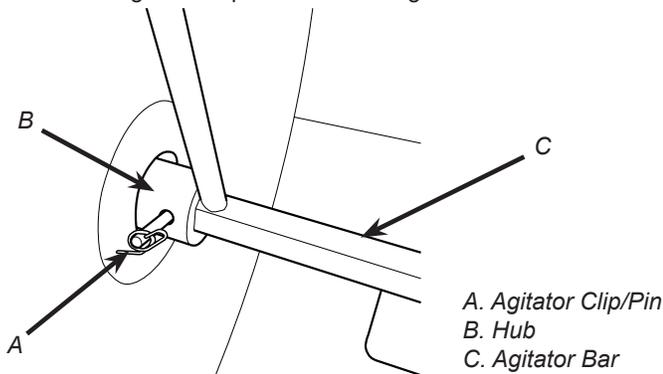
11. Disconnect the Auger Motor wire harness from junction box.
12. Remove the four (4) screws from the bracket holding the Auger Motor, flavor injector bracket, and LED light bracket.
13. Slide the Motor and Mounting Plate Assembly off of the Auger Shaft.



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 14) 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 14) 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 & 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 on previous page 14.
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 on previous page 14.
9. Place syrup lines into sanitizing solution and activate each valve to fill 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 & Sanitizing Flavor Injector Lines

1. Disconnect the each flavor injector line 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 14.
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.

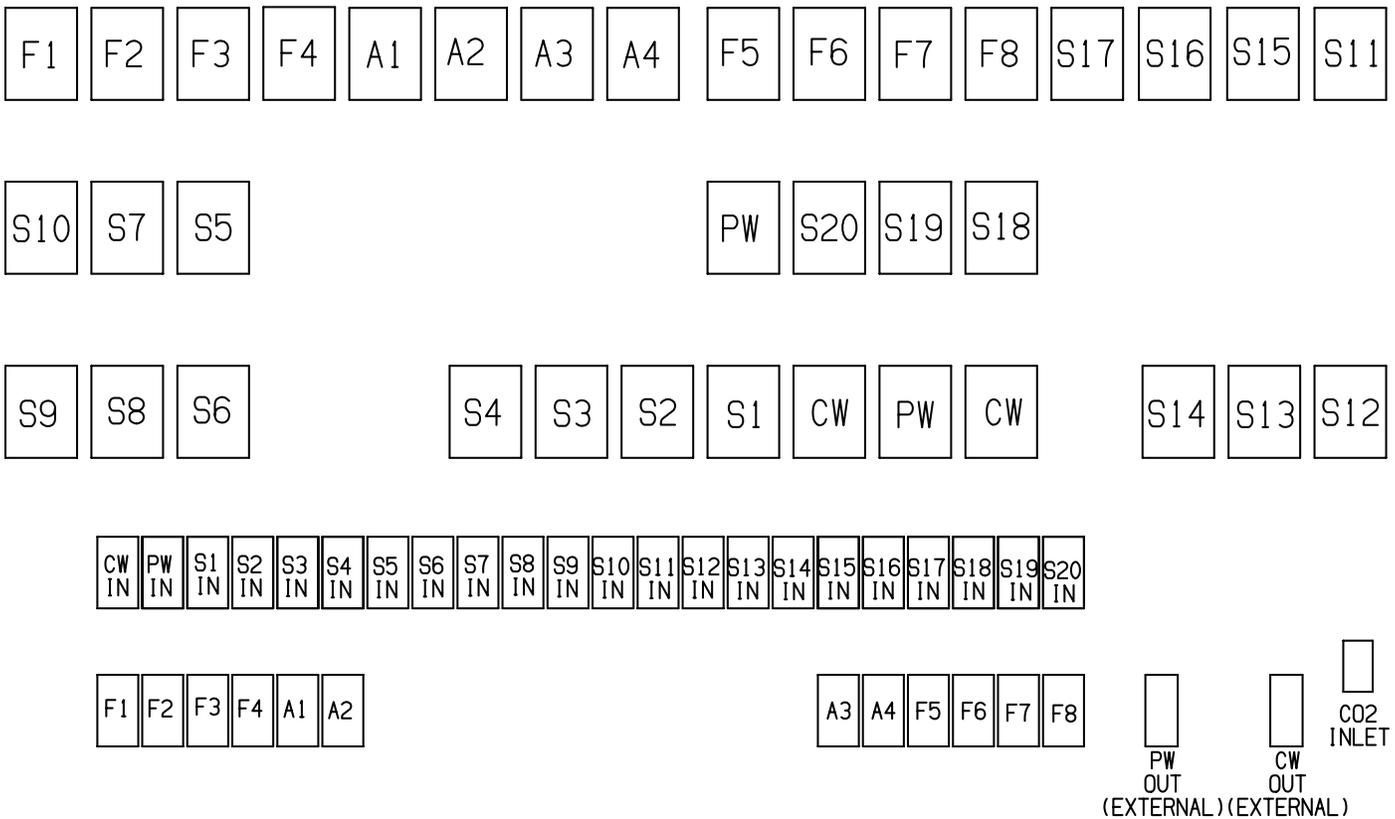
7. Flush out cleaning solution from the flavor injector lines using clean, warm water.
8. Prepare Sanitizing Solution described on page 14.
9. Place flavor lines into sanitizing solution and activate each line to fill with sanitizer. Let sit for ten (10) minutes.
10. Reconnect syrup lines to bag-in-box 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.

## PLUMBING DIAGRAM

### FS44 Sensation Unit Plumbing Diagram



PLUMBING DIAGRAM PN: 06-4017

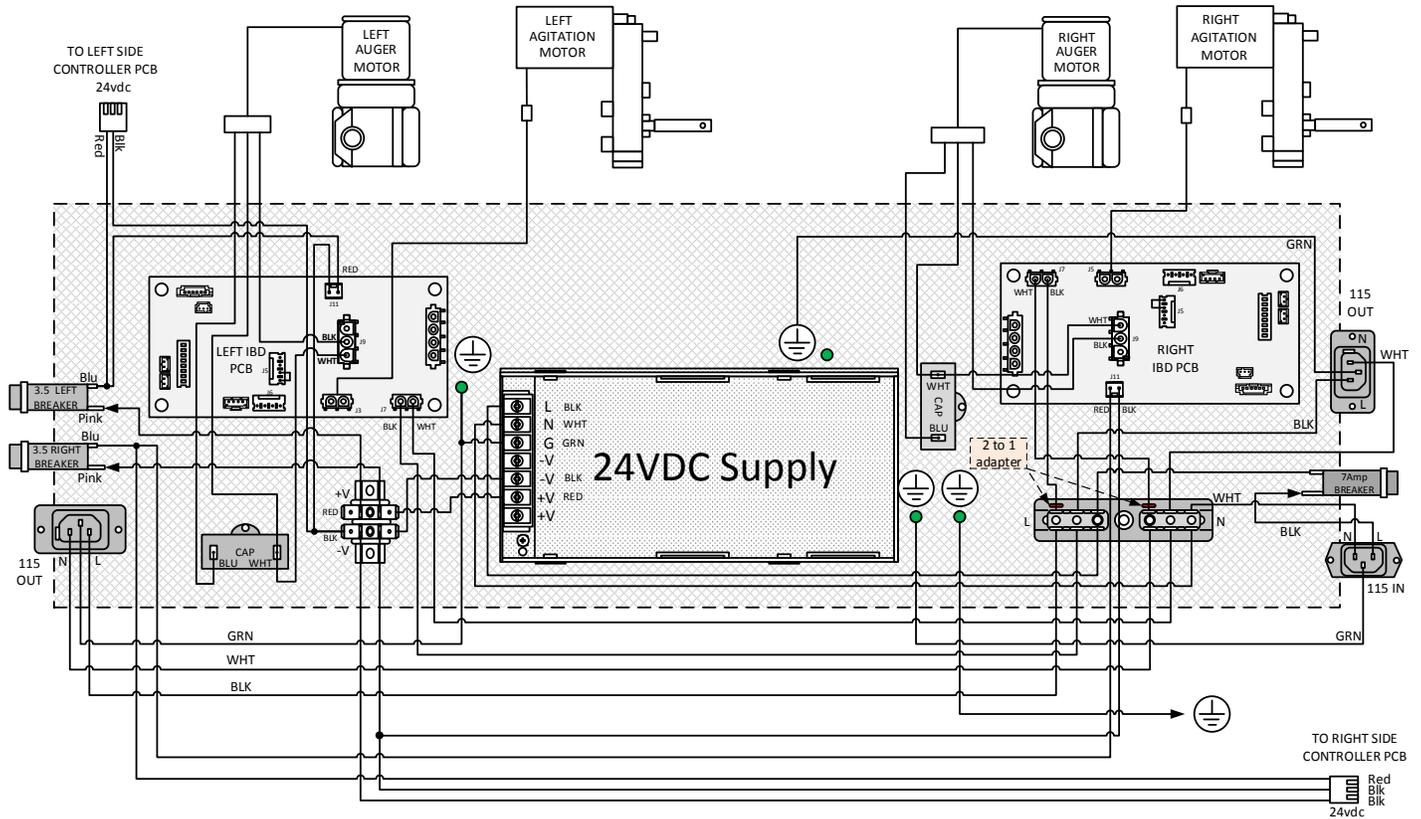
## Dispenser Disposal



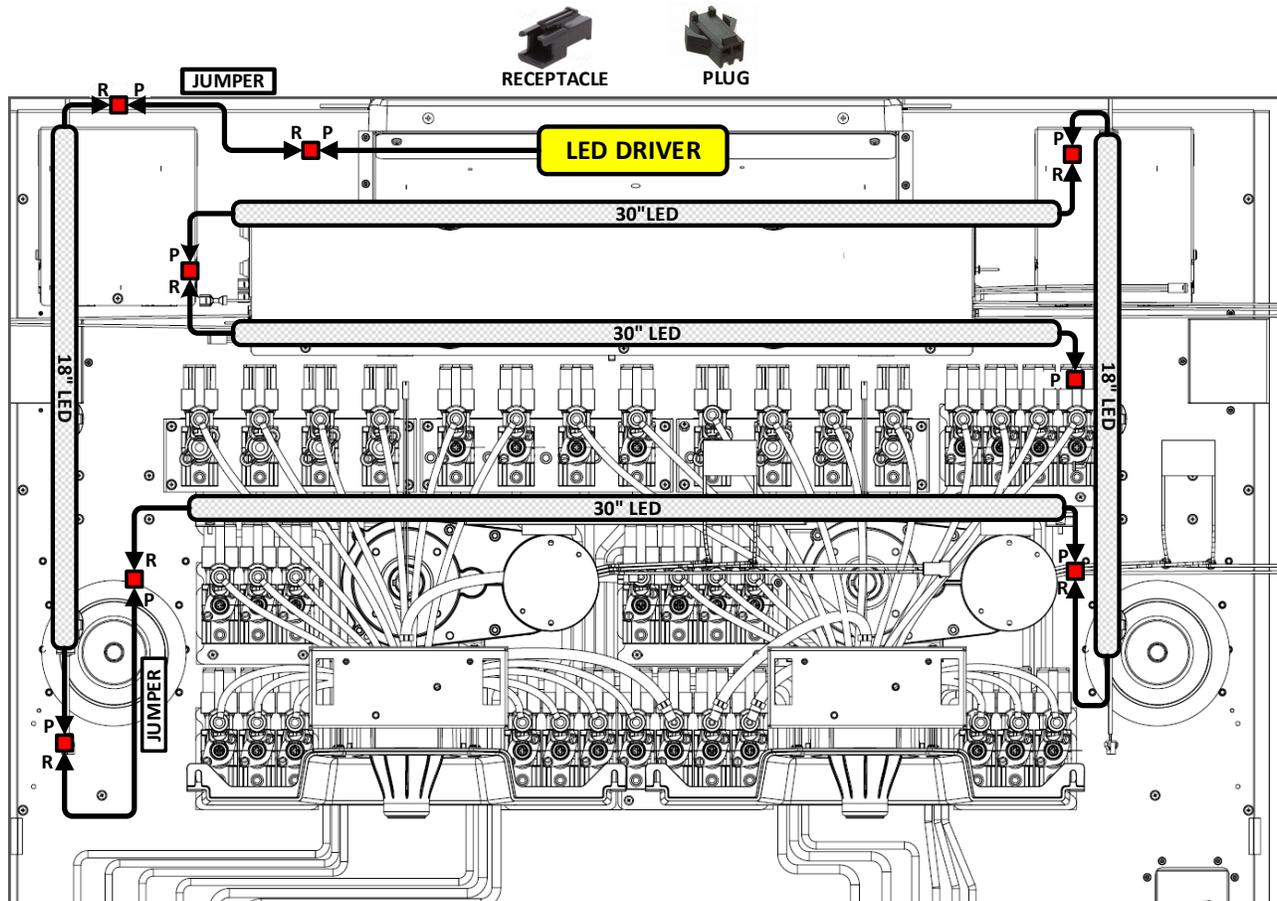
To prevent possible harm to the environment from improper disposal, recycle the unit by locating an authorized recycler or contact the retailer where the product was purchased. Comply with local regulations regarding disposal of the refrigerant and insulation.



# Power Supply Wiring Diagram - 115 Volt



# LED Lighting Configuration



## DIP Switch Legend

SW1

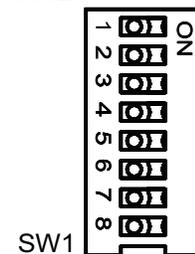
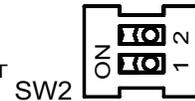
SWITCH #		AUTO AGITATE OFF TIME
3	4	
*OFF	OFF	NO AUTO AGITATION
OFF	ON	20 MINUTES
ON	OFF	40 MINUTES
ON	ON	60 MINUTES

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.

# LANCER®

Lancer Corp.  
800-729-1500  
Technical Support/Warranty: 800-729-1550  
custserv@lancercorp.com  
lancercorp.com