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# INSTALLATION INSTRUCTIONS

## ED 2XX FLAVORBLAST™ KITS FOR DUAL MERCHANDISER

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**Revision: D**

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The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. It is assumed that appropriate safety precautions are taken and that all local safety and construction requirements are being met, in addition to the information contained in this manual.

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### **Contact Information:**

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This document contains the original instructions for the unit described.

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# SAFETY INSTRUCTIONS

## SAFETY

### WARNING:

Before starting installation, read and understand all safety label and warnings on the machine. Also review and understand all safety instructions in the owners, installation and service manuals.

**Failure to comply could result in serious injury, death or damage to the equipment.**

## QUALIFIED SERVICE PERSONNEL

### WARNING:

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit.

**All wiring and plumbing must conform to national and local codes. Failure to comply could result in serious injury, death or equipment damage.**

## SAFETY PRECAUTIONS

This unit has been specifically designed to provide protection against personal injury. To ensure continued protection observe the following.

### WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work.

**Failure to comply could result in serious injury, death or damage to the equipment.**

### CAUTION:

Always be sure to keep area around the unit clean and free of clutter.

**Failure to keep this area clean may result in injury or equipment damage.**

# INSTALLATION INSTRUCTIONS

**NOTE: Ensure primary regulator is turned off on CO2 tank in Back-Room Package (or where applicable, if located in other area).**

## Loose Shipped Parts

1. Merchandiser with keypad housing
2. Valve solenoid assemblies (2 or 4 flow controls)
3. Nozzle bracket (w/PC board) and inner nozzle, large, and small FlavorBlast™ brackets
4. Harnesses
  - Jumper to control board
  - Power harness
  - Solenoid harness
5. Push bar ice (shorter)
6. Miscellaneous parts (clips, cable ties, 1/8 rivets, 3-16 rivets, labels)

### Items not included in this kit:

1. BIB pump for each flavor syrup
2. Beverage tubing and miscellaneous fittings
3. Regulator (adjustable to 30 psig)

## Tools Required

1. Drill w/.128 drill bit (#30) or equivalent and .194 drill bit
2. #2 Phillips screwdrivers (stubby and standard)
3. Pop rivet gun or equivalent for 1/8 rivets and 3-16 rivets
4. Pliers – adjustable, Wire cutters
5. Tape measure

## Installation

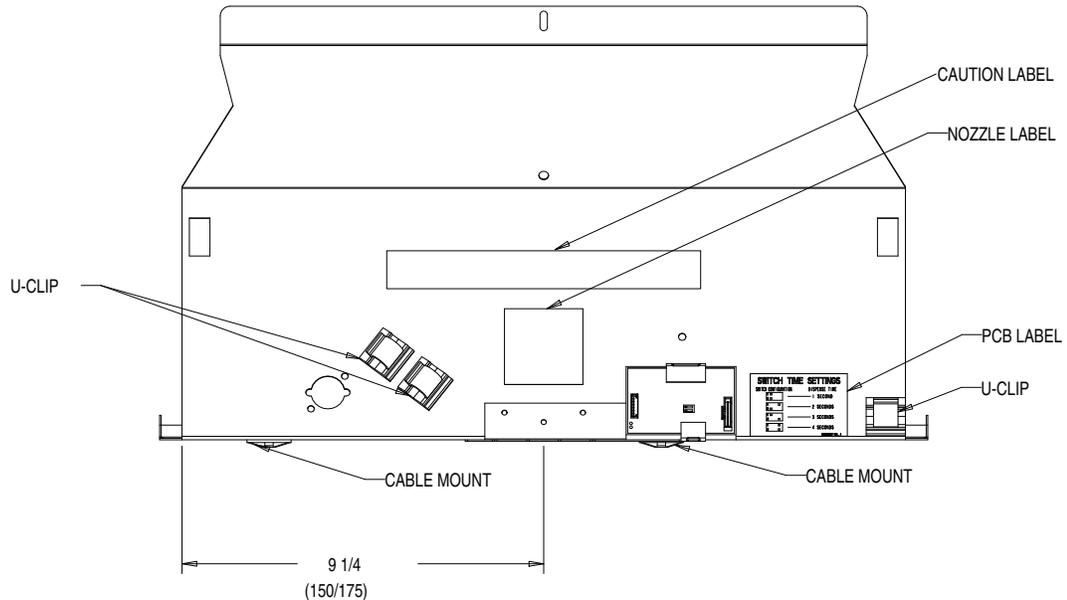
1. Remove the merchandiser and light bulb. Using white lens and graphics (old or new-if applicable) install into new merchandiser assembly.
  - For kits with graphics, only white lens will be reused;
  - For kits without graphics, white lens and graphics will be reused.
2. Remove clear 'CAUTION' label from front of electrical box cover and discard (new label is included in this kit and will be reinstalled in step 10).
3. Remove lower splash panel.
4. Remove upper portion of clear ice chute cover.

### For Machines with Push Bar Ice Only

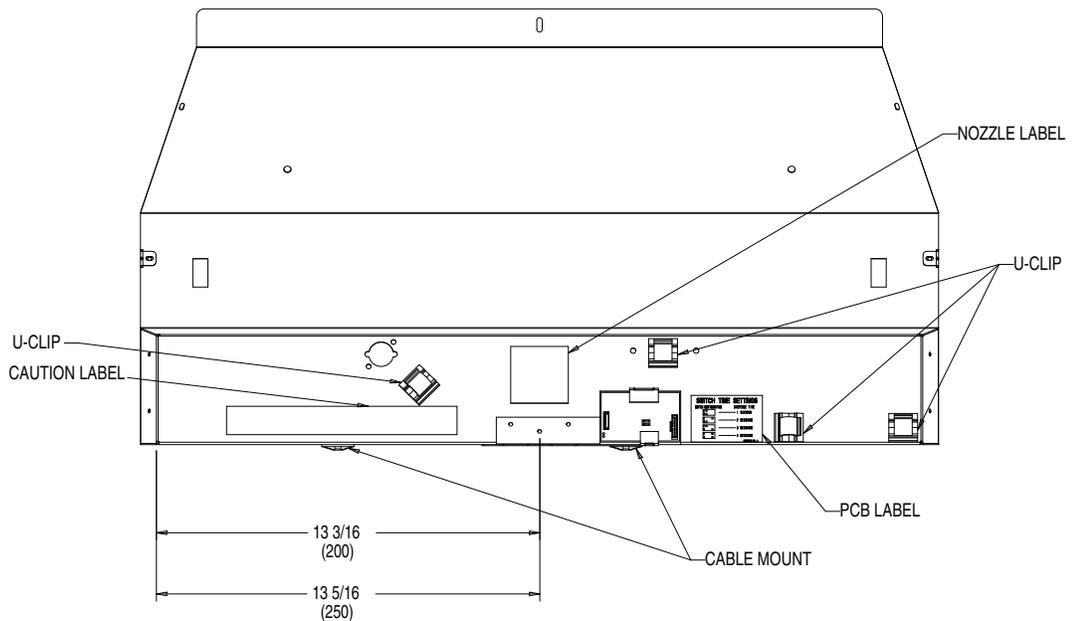
5. Replace old push bar ice lever on machine with new shorter push bar ice lever.

**NOTE: Steps 7 to 9 are critical. Mounting of nozzle bracket must be centered on electrical box cover for inner nozzle to properly align with cut-out in bottom of new merchandiser.**

- Locate center of white aluminum electrical box cover and mark center (center for 1x units is 9 1/4" - see Figure 1; center for 200 units is 13 3/16" or center for 250 units is 13 5/16" - see Figure 2). Draw vertical line approximately 1" long, starting from bottom of electrical box cover.



**Figure 1. ED 150/175 Layout**



**Figure 2. ED 200/250 Layout**

- Using nozzle bracket (bracket with large U-slot and mounted control board) as template, line up middle hole in bracket with center line drawn in step 7. Mark location for (3) .128 holes (use #30 drill bit) and drill into electrical box cover.

**NOTE: Take care to only drill about 1/2" past surface of electrical box and not to damage control board.**

- Open electrical box cover and remove debris from drilling operation. Close and secure electrical box cover. Install nozzle bracket with 1/8 aluminum rivets, included in this kit.
- Apply 'nozzle installation' label directly above nozzle bracket. Apply 'Switch time settings' label to the right of control board and new caution label (see Figure 1 or Figure 2).

**Electrical Hook-ups**

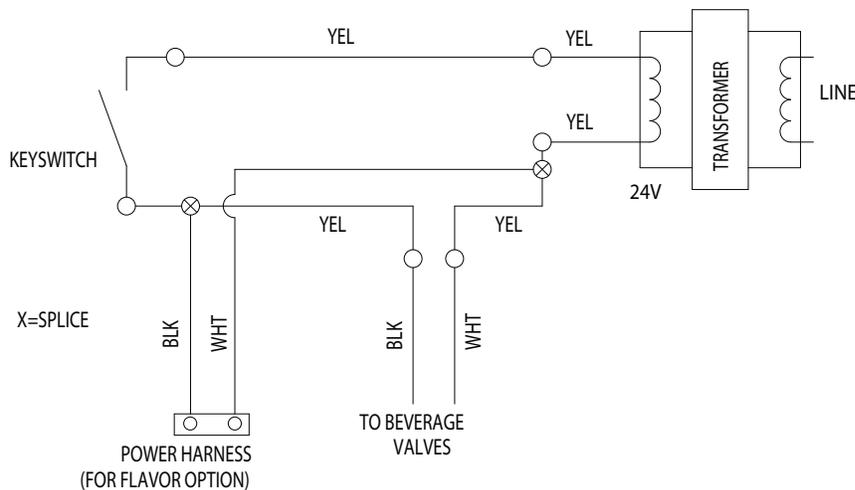
10. Remove baffles, metal covers, from area above and behind valves.

**NOTE: This is not easy due to space constraints but can be accomplished using a short stubby #2 phillips screwdriver or by rotating entire electrical box forward enabling use of standard #2 phillips screwdriver.**

The plastic grommets must be completely removed from each baffle to allow for replacement of each baffle where applicable.

11. Locate key switch on left side of unit. To allow better access behind beverage panel it may be necessary to loosen screws attaching left side of beverage panel.

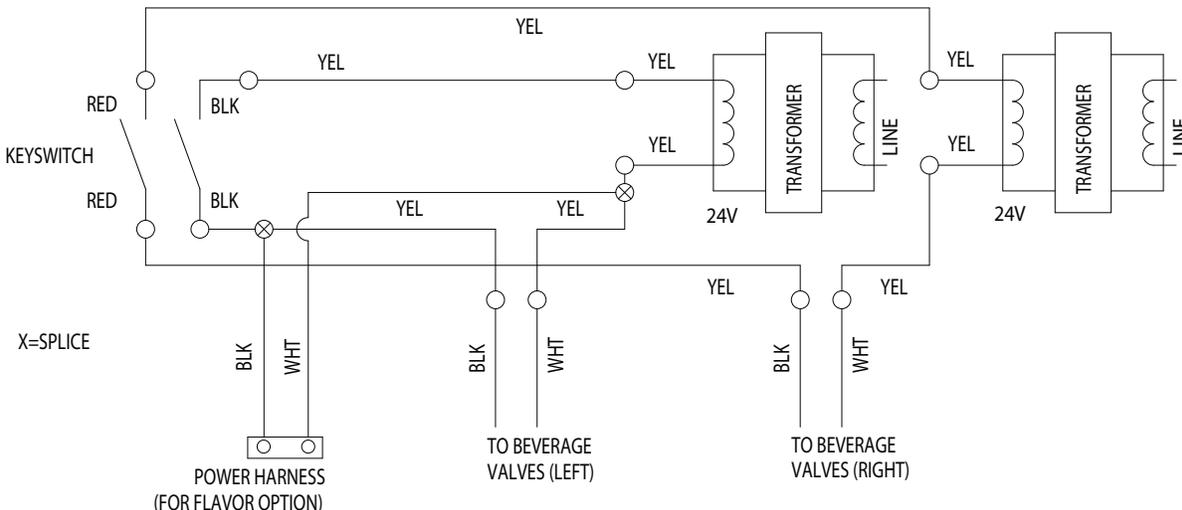
A. For units with 1 transformer, located yellow wire connected at key switch which will be wire nudded at other end to bundle of black wires. Note: You may need to cut cable tie to verify black wires connected to yellow wire (see Figure 3).



**Figure 3. Wiring Schematic (1 Transformer) for Steps 11-12**

B. For units with 2 transformers, locate black wire connected at key switch.

**NOTE: The cable tie may need to be cut to allow enough slack to splice into this wire (Figure 4).**



**Figure 4. Wiring Schematic (2 Transformers) for Steps 11-12**

Feed black wire from 'new' 2-pin power harness through top of plastic grommet. Splice this wire into the yellow wire identified above from key switch using 'red' scotch splice.

12. Locate 2 yellow wires from transformer coming out of bottom right side of electrical box. Disconnect one set of yellow wires and temporarily connect the end of stripped white wire to this yellow wire.

**NOTE: Do not splice white wire into this yellow wire until it is determined that yellow wire is neutral wire from transformer- see testing in step 20. Connect 2-pin connector on power harness to 2-pin connector on control board.**

13. Connect solenoid harness to the solenoid valves prior to installing solenoid valve assemblies onto machine (see Figure 9 or Figure 10). Proceed with installing solenoid assemblies in area where baffles were removed.

**NOTE: The plastic grommets on both sides must be re-installed into base plate of each assembly.**

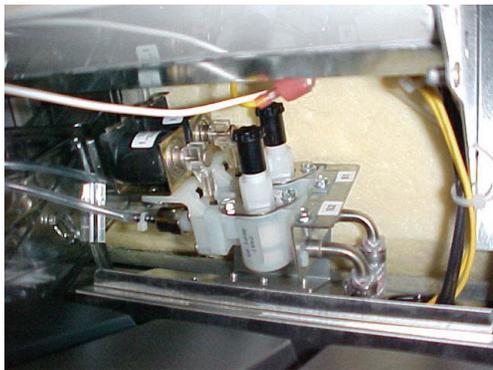
14. Use the screws that secured the baffles, removed in step 11, to secure/install solenoid assemblies (see Figure 5 or Figure 6). Connect 6-pin connector on solenoid harness to control board. Route solenoid harness under electrical box and secure to bottom of electrical box with cable tie mount and cable ties.

15. Locate 30" jumper from merchandiser assembly and connect to control board. Re-install light bulb. Temporarily connect power to unit.

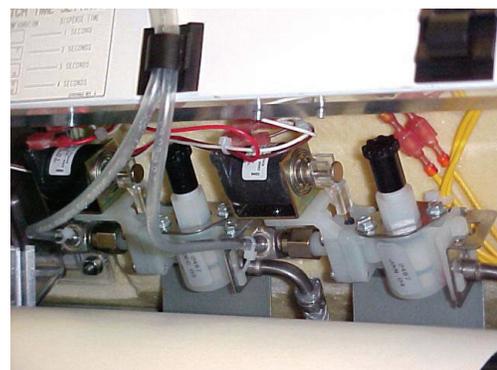
**NOTE: The bulb will come on and agitation will occur.**

16. Test flavor keypad for valve solenoid operation, check soda valves for normal operation as well. Connect white wire from power harness to the other yellow transformer wire if the keypad does not activate solenoids.

**NOTE: Disconnect power once the keypad operation has been successfully tested. Install U-clip to right side of control label to secure jumper slack. Secure any remaining harnesses under electrical box with cable mount and cable ties (see Figure 1 or Figure 2 for recommended location of cable mounts).**



**Figure 5. ED 150/175 Solenoids  
(Right Side Shown)**



**Figure 6. 200/250 Solenoids  
(Right Side Shown)**

17. Beverage tubing (1/4 I.D.) should be routed from back of valve panel to center area where soda valve hook-ups from coldplate are located.
18. Replace upper portion of clear ice chute.
19. Locate white inner nozzle and hold several inches below nozzle bracket. The nozzle will be attached to a clip shown in Figure 12. Tubing (1/8 I.D.) from solenoids should be routed under electrical box and installed into top of inner nozzle.

Secure 1/8 I.D. tubing to electrical box front with U-clips (see Figure 7 for 150/175 models or Figure 8 for 200/250 models) take note to properly clean surface of electrical box prior to attaching U-clips.

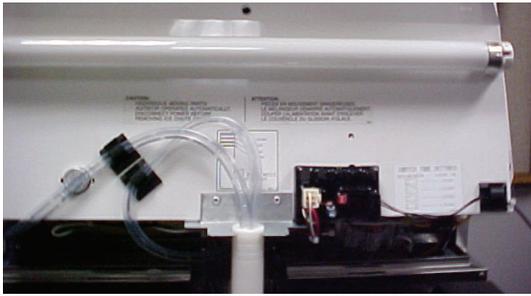


Figure 7. ED 150/175 with 4 Flavor Option



Figure 8. ED 200/250 with 4 Flavor Option

**NOTE:** The nozzle will not be attached to the nozzle bracket, but will be located several inches below the bracket so leave several inches of slack in the tubes.

20. Replace upper portion of clear ice chute.

**Electrical Testing**

21. Set-up syrup flavors in Back-Room Package area as shown in BRP set-up (see Figure 7 or Figure 8).

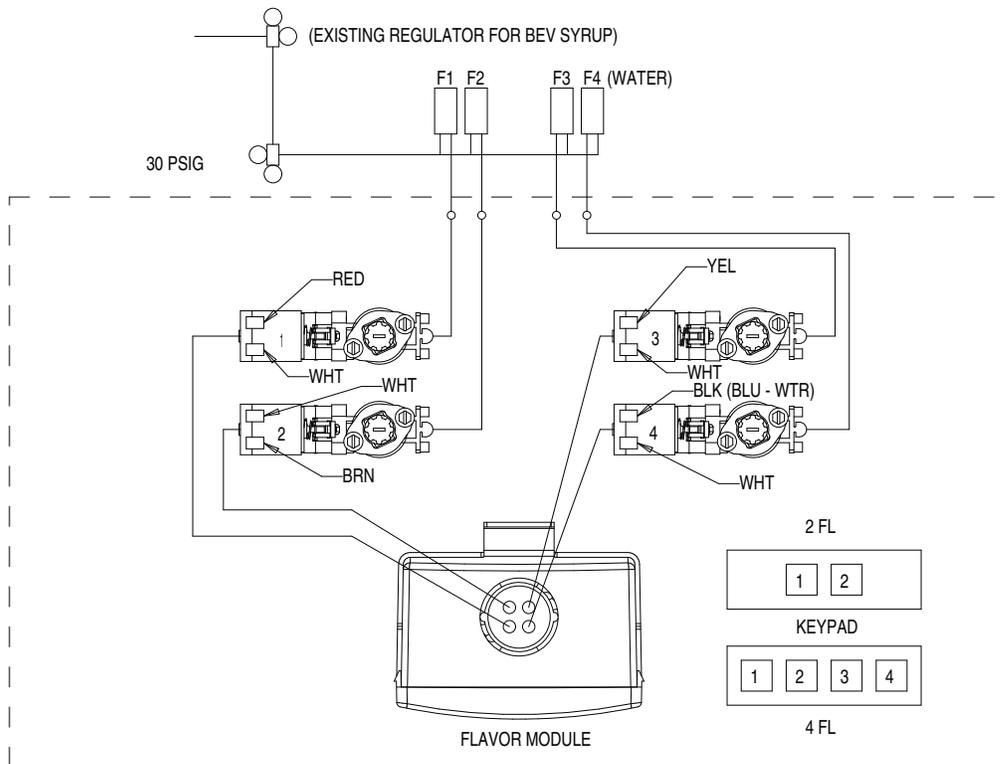
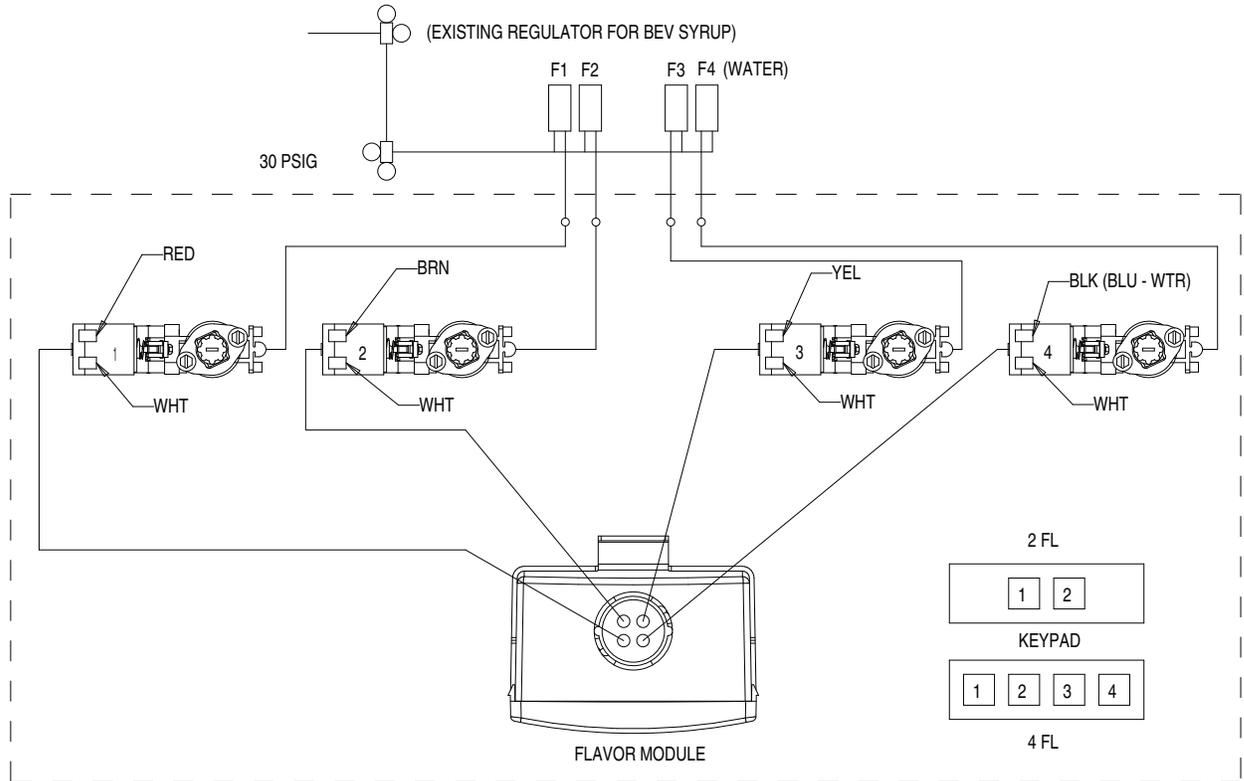


Figure 9. ED 150/175 Plumbing/Electrical Connections



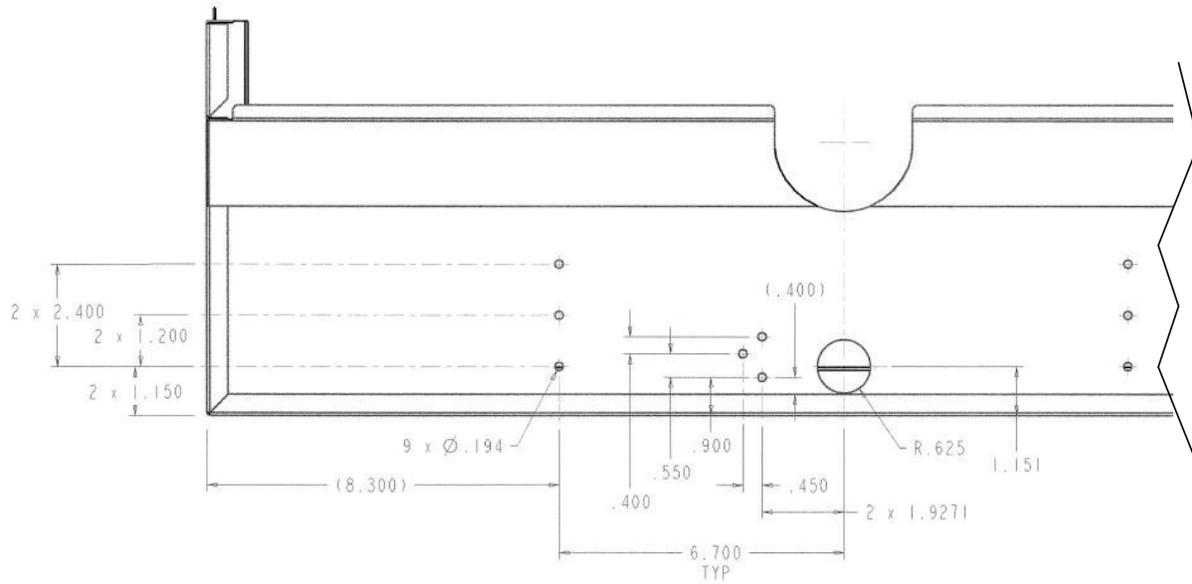
**Figure 10. ED 200/250 Plumbing/Electrical Connections**

22. Connections to dispenser can proceed once the Back-Room Package items have been installed and tubing from BRP have been run to dispenser. Make note of which flavors are hook-ups 1, 2, 3, and 4.
23. Make connections from 'ambient' FlavorBlast™ syrup lines to valve solenoid lines at front of machine (see step 17).
24. Apply appropriate flavor decals to correspond to FlavorBlast™ syrup hook-ups.
 

**NOTE: The far left button corresponds to hook-up 1 and so forth. Use blank decals if your particular flavor decal is not enclosed in this kit.**
25. Apply plumbing label for FlavorBlast™ to the inside of the splash panel next to beverage valve plumbing label.

## Dual Merchandiser Modifications

1. Drill holes in Merchandiser according to Figure 11.



**Figure 11. ED 250 – Holes Drilled Into Bottom Of Dual Merchandiser**

2. Attach small sheet metal piece using 1/8 aluminum rivets, included in this kit. See Figure 12.



**Figure 12. ED 250 – Small Bracket Attachment**

3. Attach large sheet metal piece as shown in Figure 12. Use 1/8 aluminum rivets, included in this Kit.



Figure 13. ED 250 – Flavorblast Attachment Installation

## Start-up

1. Reconnect power to dispenser and turn on primary regulator on CO<sub>2</sub> tank in Back-Room Package.
2. Actuate keypad to purge syrup through beverage tubing and through inner nozzle. Initial purging can also be accomplished by removing the merchandiser with the harness still connected to control board. Manually pushing the plungers on each solenoid valve will purge the syrup through the inner nozzle. Keep keypad housing and connections clear of drip tray area when purging in this manner.
3. Check connections in the following areas for possible leaks: in front of the unit at syrup connections, elbow fittings at flow controls, and connections at inner nozzle.
4. With keypad jumper connected to control board proceed with installation of the new merchandiser (with assembled components) onto unit. Wind up and tuck slack from jumper and keypad onto U-clip mounted to right side of control board label.

**NOTE: The inner white flavor nozzle should protrude through bottom of keypad housing by 1/4-1/2" (outer nozzle to be installed last).**

5. Re-install front splash panel.
6. Install UF-1 outer nozzle to bottom of FlavorBlast™ keypad housing.

Unit should now be ready for normal soda operation with FlavorBlast™ option added.

## Troubleshooting

Flavor syrups do not dispense	No 24 volt power to PC board. No CO2 pressure. Empty syrup tank. Kinked tubing. Clogged inner nozzle. Defective PC board. Defective harness from keypad. Defective Flow control. Defective solenoid harness. Defective keypad.
Flavor dispenses for more than 1 sec	Dip switch settings on control board incorrect. PC board defective. Defective flow control.
Flavor dispenses more than .5 oz	Dip switch settings on control board incorrect. Flow control incorrectly set. PC board defective. Defective flow control.

## Sanitizing Procedure



### WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work.

**Failure to comply could result in serious injury, death or damage to the equipment.**

- Soap solution – Use a mixture of mild detergent and warm (100°F) potable water.
- Sanitizing solution – Use ½ ounce of household bleach in 1 gallon of potable water. Preparing the sanitizing solution to this ratio, the required solution of 200 PPM will be obtained.
- Cleaning tank – Fill clean, empty tank with a mixture of mild detergent and five (5) gallons of warm potable water (120°F).

### Sanitize Flavor Syrup Lines - B-I-B System

1. Remove all the quick disconnects from all the B-I-B containers.
2. Fill a suitable pail or bucket with soap solution.
3. Submerge all disconnects (gas and liquid) in the soap solution and then clean them using a nylon bristle brush. Do not use a wire brush. Rinse with clean water.
4. Using a plastic pail, prepare approximately five (5) gallons of sanitizing solution.
5. Rinse the B-I-B disconnects in the sanitizing solution.
6. Sanitizing fittings must be attached to each B-I-B disconnect. If these fittings are not available, the fittings from the empty B-I-B bags can be cut from the bags and used. These fittings open the disconnect so the sanitizing solution can be drawn through the disconnect.
7. Place all the B-I-B disconnects into the pail of sanitizing solution. 'Purge' all the flavor valves until the sanitizing solution is flowing from inner nozzle. This can easily be accomplished by holding down each keypad button for at least 15 seconds. After 15 seconds the valve will go into 'purge' mode and continuously dispense for the next 60 seconds. Allow sanitizer to remain in lines for at least thirty (30) minutes.

8. Remove nozzle cover (outer nozzle) from flavor module housing. Clean in a soap solution and rinse with clean water.
9. Remove the sanitizing fittings from the B-I-B disconnects and connect the disconnects to the appropriate B-I-B container. Operate the flavor valves until all sanitizer has been flushed from the system and flavor syrup is flowing freely.

### Splash Shield for ED200/250 FlavorBlast™

Instructions to add front splash shield for ED 200/250 FlavorBlast™.

1. Locate splash shield - see Figure 14.

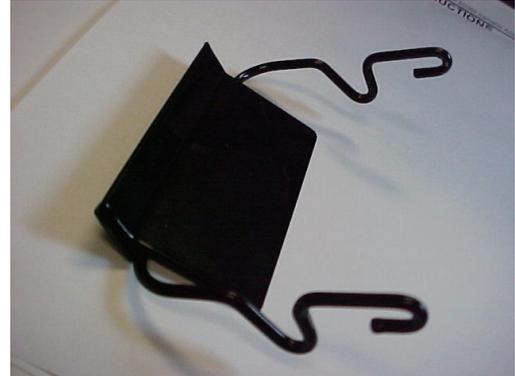


Figure 14. Splash Shield

2. Locate the 4<sup>th</sup> cross support from front of cup rest and position 'hooks' from splash shield as shown – see Figure 15.



Figure 15. Locate on Cup Rest

3. Splash shield should snap onto cup rest as shown.
4. Secure shield to cup rest with black wire cable ties in appropriate area as noted by arrows– see Figure 16.

**NOTE: White background inside drip tray on Figure 15 and Figure 16 inserted for clarity.**



Figure 16. Splash Shield Installed



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