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GEMINI TWO-FLAVOR POST-MIX ELECTRICALLY OPERATED DISPENSING VALVE ON CORNELIUS INC; POST-MIX OVERCOUNTER DISPENSERS AND DISPENSING TOWERS

Read and understand these Instructions thoroughly before making installation. Retain these Instructions as part of your equipment manual.

These Instructions outline the procedure to install the Gemini Two-Flavor Post-Mix Dispensing Valve (P/N 309912000) on Cornelius Inc; Overcounter Post-Mix Dispensers and Dispensing Towers having standard block-mount SF-1 Dispensing Valves. The Gemini Dispensing Valve may be installed on Units of different manufacture (see IMPORTANT note in Figure 1). The Gemini valve cannot be installed on Towers having a foamed-in carbonated water manifold.

Cornelius units covered in these Instructions are:

<u>DISPENSER</u>	<u>MAXIMUM NO. OF GEMINI VALVES</u>
Venture	5
Vanguard	4
Spirit	4

Each Gemini valve is accompanied by the following loose-shipped parts:

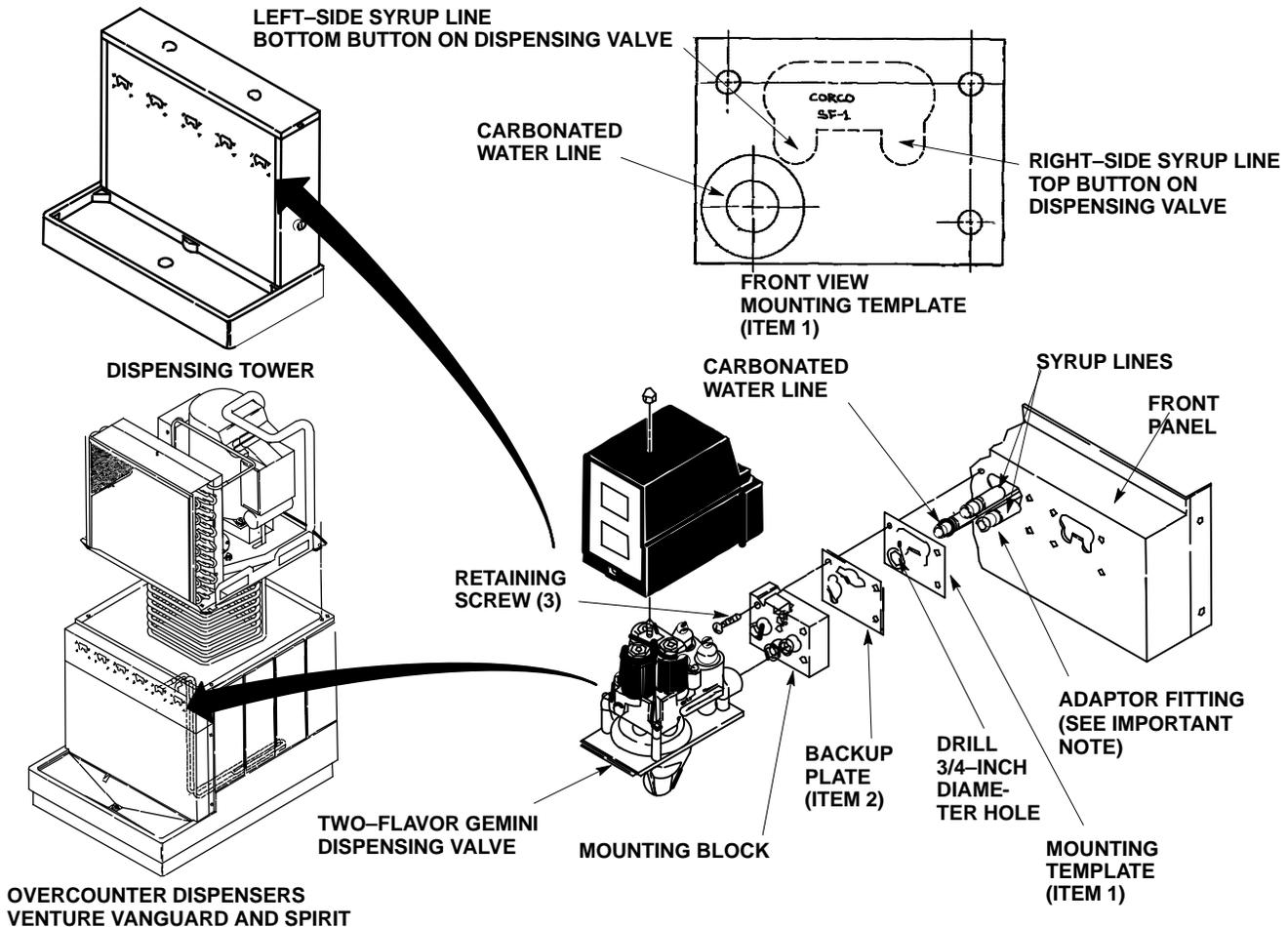
Table 1. Loose-Shipped Parts			
Item No.	Part No.	Name	Qty.
1	309757000	Mounting Template	1
2	309806000	Backup Plate	1

INSTALLING GEMINI TWO-FLAVOR DISPENSING VALVE

	WARNING: Disconnect electrical power from the Unit before attempting to install the Gemini Two-Flavor Post-Mix electrically Operated Dispensing Valve on the Unit.
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1. Shut off electrical power, plain water, and CO₂ gas pressure to the carbonator. Shut down carbonated water circulating pump if in system.
2. Disconnect soft drink tank from system affected. If Bag-in-Box system, shut off CO₂ gas supply to applicable syrup pump.
3. Relieve syrup and carbonated water system pressures by activating the Dispensing Valve.

4. Disconnect electrical power from Overcounter Dispenser or tower.
5. Overcounter Dispenser – Remove drop-in refrigeration assembly for access to back-side of front panel and inside of water tank.
Dispensing Tower - Disassemble tower for access to back-side of front panel.
6. Disconnect SF-1 Dispensing Valve wiring harness connector from Dispenser or Tower wiring harness connector.



IMPORTANT: The barbed adaptor fittings on the ends of the syrup and carbonated water lines that are to be installed in back of the Gemini Dispensing Valve mounting block must be .360 O.D. to properly fit the mounting block. Listed are part numbers of .360 O.D. fittings and tubing sizes that will adapt to these fittings that *must* be used to make syrup and carbonated water connections to the Gemini dispensing valve mounting block. **DO NOT ATTEMPT TO CONNECT .370 O.D. ADAPTOR FITTINGS TO GEMINI DISPENSING VALVE MOUNTING BLOCK.**

Part No.	Description
318972000	Straight Adaptor Fitting, .360 O.D. (accepts .156 I.D. Tubing)
318973000	Straight Adaptor Fitting, .360 O.D. (accepts .250 I.D. Tubing)
2212	Elbow Adaptor Fitting, .360 O.D. (accepts .250 I.D. Tubing)

FIGURE 1. INSTALLATION

IMPORTANT: Care must be taken when removing screws securing mounting block to front panel, not to strip screw threads in panel. If threads become stripped, machine screws and nuts will have to be used to secure the new Gemini Two-Flavor Dispensing Valve mounting block and backup plate to the front panel.

7. Remove SF-1 Dispensing Valve and mounting block from front panel. Retain mounting block retaining screws. SF-1 Dispensing Valve is surplus.

NOTE: Installation Kit (P/N 309756000) is available which includes a 3/4-inch hole metal Cutting Tool (step drill) P/N 309758-000 and six mounting templates (P/N 309757000).

8. Tape MOUNTING TEMPLATE, (item 1) in position over hole on front panel (see Figure 2) where SF-1 dispensing valve mounting block was removed.
9. Centerpunch and drill a 3/4-inch diameter hole in front panel as indicated on template, then remove template.

Vanguard and Spirit Overcounter Dispensers (see Figure 1)

Additional syrup coils (two on each side) must be installed in the Vanguard Dispenser water tank. Additional syrup coils must be placed underneath existing coils and be fastened to existing coils with plastic wire ties. On Spirit Dispenser, additional syrup coils may be placed side by side in bottom of water tank and fastened to existing coils with plastic wire ties.

Venture Overcounter Dispenser (see Figure 1)

Additional syrup coils may be placed side by side in the bottom of the Venture Overcounter Dispenser water tank and fastened to existing coils with plastic wire ties.

10. Overcounter Dispenser. (see Figure 1)
 - A. Install additional syrup coil(s) in Overcounter Dispenser water tank and secure with plastic wire tie(s).
 - B. Route new syrup coil inlet line down to underside of the Overcounter Dispenser.
 - C. Route new syrup coil outlet line, syrup and carbonated water lines, that were disconnected from SF-1 Dispensing Valve, out through appropriate holes in front panel.

Dispensing Tower. (see Figure 1)

NOTE: New syrup inlet line for the Dispensing Tower Gemini Two-Flavor Dispensing Valve may be connected to a warm syrup source or syrup may be cooled by a Cooling Unit or Cold Plate.

- a. Route new syrup inlet line to inside of Dispensing Tower.
 - b. Install appropriate mounting block adapter fitting on end of syrup inlet line.
 - c. Route new syrup inlet line and syrup and carbonated water lines that were disconnected from SF-1 dispensing valve, out through appropriate holes in Tower front panel.
11. Remove cover from Gemini Two-Flavor Dispensing Valve, then unlock and separate mounting block from valve.
 12. Slide backup plate (item 2) up on carbonated water and syrup lines.
 13. Connect carbonated water and syrup lines to mounting block.
 14. Slide backup plate up to mounting block and lock carbonated water and syrup lines in block.
 15. While holding backup plate in position on mounting block, place block in position on Dispenser or Tower front panel. Secure block to front panel with three screws retained when removing SF-1 Dispensing Valve. **MAKE SURE DISPENSER OR TOWER DISPENSING VALVE WIRING HARNESS IS ROUTED OUT THROUGH MOUNTING BLOCK BEFORE INSTALLING BLOCK ON FRONT PANEL.**
 16. Install Gemini Two-Flavor Dispensing Valve on mounting block. **MAKE SURE SAFETY LATCH ON BOTTOM OF DISPENSING VALVE IS HOOKED ON MOUNTING BLOCK PIN TO SECURE VALVE ON BLOCK.**
 17. Connect Gemini Two-Flavor Dispensing Valve wiring harness connector to Dispenser or Tower wiring harness connector.

18. Connect syrup source line to Dispenser or Tower syrup inlet line.
19. Reassemble Dispenser or Tower by reversing disassembly procedure.
20. Restore syrup and carbonated water supplies and electrical power to Dispenser or Tower.
21. Operate Dispensing Valves to bleed all air from syrup and carbonated water systems.
22. Check for leaks.

ADJUST WATER FLOW RATE AND WATER-TO-SYRUP “RATIO” OF DISPENSED PRODUCT

ADJUSTING WATER FLOW RATE

(see Figure 2)

1. Disconnect syrup supply from one of the syrup systems connected to the Gemini Two-Flavor Dispensing Valve.
2. Using applicable dispense button on Dispensing Valve cover, test dispensing valve for water flow rate in accordance to system it is connected to.
3. Turn Dispensing Valve water flow regulator adjusting screw to the left (counterclockwise) no more than 1/4-turn at a time for less water or to the right (clockwise) no more than 1/4-turn at a time for more water.
4. Test dispense Dispensing Valve and adjust water flow regulator as many times as necessary until desired water flow rate is achieved.
5. Connect soft drink tank back into syrup system.

ADJUSTING WATER-TO-SYRUP “RATIO” OF DISPENSED PRODUCT

(see Figure 2)

NOTE: Make sure water flow rate is satisfactory or has been adjusted on dispensing valve with adjustable water flow regulator before adjusting Water-to-Syrup “Ratio” of dispensed drinks.

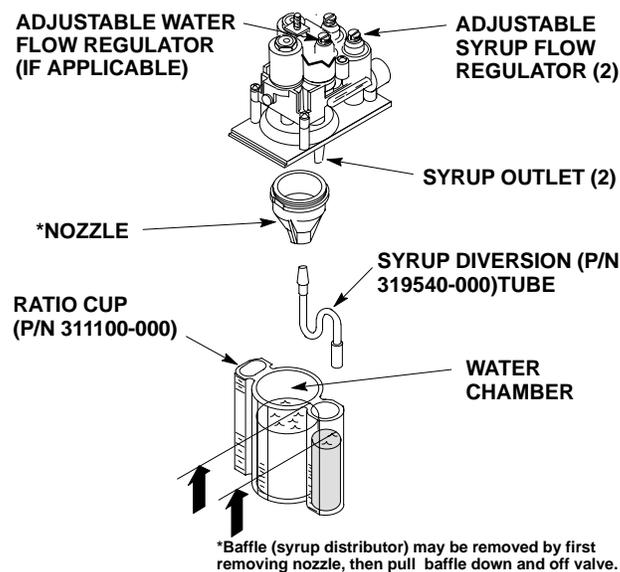


FIGURE 2. RATIO CUP AND SYRUP DIVERSION TUBE ASS'Y

Adjust Water-to-Syrup “Ratio” of dispensed product by using Ratio Cup (P/N 311100000) and Syrup Diversion Tube Assembly (P/N 319540000) as follows:

1. Remove nozzle from dispensing valve.
2. Slide nozzle on to long portion of syrup diversion tube, then push rubber end of syrup diversion tube up on dispensing valve syrup outlet.
3. Slide nozzle up on syrup diversion tube and reinstall on dispensing valve.

NOTE: Refer to syrup manufacturer’s recommendations on syrup package for Water-to-Syrup “Ratio”.

4. Hold large chamber of ratio cup under dispensing valve nozzle. Place free end of syrup diversion tube into syrup chamber marked for proper ratio. Press applicable dispense button and dispense approximately five ounces of water into ratio cup. Water and syrup levels should be even in ratio cup.
5. If water and syrup levels are not even in ratio cup, turn applicable syrup flow regulator adjusting screw to the left (counterclockwise) no more than 1/4-turn at a time for less syrup or to the right (clockwise) no more than 1/4-turn at a time for more syrup.
6. Repeat Water-to-Syrup “Ratio” test and adjust syrup flow regulator as many times as necessary until proper ratio of dispensed drink is achieved.
7. Remove syrup diversion tube from Dispensing Valve syrup outlet and install on other syrup outlet.
8. Repeat preceding steps 4 through 6 to adjust Water-to-Syrup “Ratio” of dispensed drink on other Dispensing Valve syrup system.
9. Remove nozzle and syrup diversion tube from dispensing valve.
10. Remove nozzle from syrup diversion tube, then install nozzle on Dispensing Valve.
11. Install Dispensing Valve cover and secure with acorn nut.

CLEANING AND SANITIZING

WEEKLY CLEANING OF DISPENSING VALVE

(see Figure 2)

1. Remove nozzle and baffle from Dispensing Valve.
2. Wash nozzle and baffle in warm water.
3. Install baffle and nozzle on Dispensing Valve.

DAILY CLEANING OF UNIT EXTERIOR

1. Remove cup rest from drip tray.
2. Wash out drip tray, then rinse tray with warm water allowing water to run down drain hose.
3. Wash cup rest, then rinse cup rest with clean water. Install cup rest in drip tray.
4. Clean all external surfaces of Dispenser or Tower with sponge. Rinse out sponge with clean water, then wring excess water out of sponge and wipe off all external surfaces. Wipe dry with clean soft cloth. **DO NOT USE ABRASIVE CLEANERS.**

SANITIZING SYRUP SYSTEMS

IMPORTANT: Only qualified personnel should perform sanitizing procedure.

The syrup systems should be sanitized every 90 days following Sanitizer Manufacturer's recommendations. Use Chlor-Tergent (Oakite Products, Inc.) or equivalent sanitizer.

1. Remove quick disconnects from soft drink tanks, then rinse quick disconnects in plain water.
2. Using a clean, empty soft drink tank, prepare full tank of sanitizing solution by using 70° F to 100° F (max) plain water and 0.68 ounce per gallon of sanitizer. This mixture will provide 200-ppm of chlorine.
3. Shake sanitizing solution tank to thoroughly mix solution. Connect tank into syrup system to be sanitized, then connect CO₂ pressurizing source.
4. Place waste container under applicable Dispensing Valve. Press applicable dispense button for minimum of twenty seconds to permit sanitizing solution to purge syrup out of syrup system. Continue to dispense until only sanitizing solution is dispensed. Press and hold dispense button in for three to five seconds, then release button. Repeat for a minimum of five cycles to completely purge all syrup from valve syrup flow regulator.

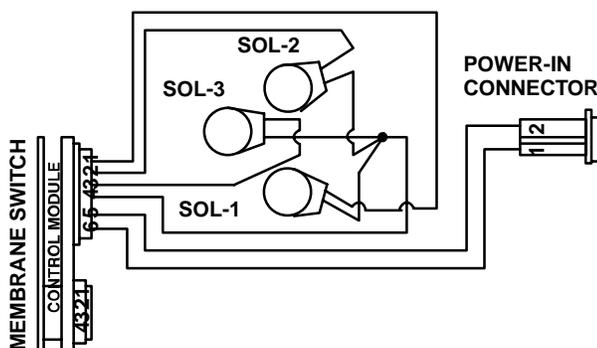


FIGURE 3. WIRING DIAGRAM

5. Repeat steps 3 and 4 preceding to purge syrup from and install sanitizing solution in remaining syrup systems.



CAUTION: Do not allow sanitizing solution to remain in syrup systems longer than 15-minutes (max) to avoid damage to metallic parts of the system.

6. Allow sanitizing solution to remain in syrup systems for not less than 10 and no more than 15-minutes (max) contact time to avoid damage to metallic parts of the system.
7. Remove tank containing sanitizing solution from the syrup system, then connect tank containing syrup into the system.



WARNING: Flush sanitizing solution from syrup systems as instructed. Residual sanitizing solution left in systems could create a health hazard.

8. Place waste container under applicable Dispensing Valve. Press applicable dispense button to permit syrup to purge sanitizing solution out of syrup system and Dispensing Valve. Continue to dispense from Dispensing Valve until only the syrup is dispensed from the system, then release button.
9. Connect tanks containing syrup into remaining syrup systems, then repeat step 8 to purge sanitizing solution out of syrup systems and until only syrup is dispensed.

WIRING DIAGRAM

See Figure 3.