Polyvend Inc.
CONWAY, ARKANSAS

SERVICE MANUAL
MODEL CSV—3
COLD DRINK MODULE

GENERAL

The CSV—3 Polyvend carbonated drink dispenser has been developed as part of the cooperative service vending program. It is one of several vending machines having conservative, office compatible styling for customized vending machine banks in small to medium sized commercial locations.

This cold drink dispenser module offers up to three different flavors of carbonated drinks in both regular and sugar free types. All drinks are refrigerated and dispensed at a pleasingly cool 36° F.

It consists of six different functional assemblies mounted in the contemporary cabinet. These are: the refrigerated dispenser head; three syrup tanks for flavors; a carbonator; a CO2 supply cylinder; cup dispenser, and the coin mechanism and controls.

SPECIFICATIONS

OVERALL DIMENSIONS:
- Height ..... 70 inches
- Width ..... 25 inches
- Depth ..... 25 inches
- Door open clearance ..... 24 inches

WEIGHT:
- Shipping ..... 395#

CAPACITIES:
- Syrup ..... 3—3 gallon tanks
- Full Ice Bank (approximate) ..... 8 pounds

REFRIGERATION PERFORMANCE:
- Drink Temperature ..... 36° F

ELECTRICAL
- Power ..... 115 VAC
- Dispenser voltage ..... 24 VAC
- Current (limit) ..... 12 amps
- Current (normal) ..... 9 amps

NOTE: *Polyvend, Inc. will not be responsible for faulty or overloaded circuits where CVS banks are installed. The exact load imposed by each bank module is stated in the related service manual. The sum of all such modules in any particular location will determine the total line load. No one module is designed to carry more than 12 amps at 115 VAC.*

NOTE: This manual applies to CSV-3 Machines after Serial #5100.

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THE POLYVEND REFRESH MODULE IS SHIPPED IN TWO CARTONS. THE LARGE CARTON CONTAINS THE COMPLETE MACHINE EXCEPT THE CARBONATOR WHICH IS SHIPPED IN THE SMALLER CARTON.

INSPECTION

- Remove shipping carton from around machine by cutting the steel band at the bottom of the carton and push carton upward.
- Locate key that is taped to the countertop.
- Using the key, open the lower compartment door.
- Pull the sliding tray out and remove all accessory items in lower compartment. Verify that the tanks, corner shelf bracket, and tank mounted regulator/gauges have been included. (If optional water filter was ordered, it will also be packed in lower compartment). (FIG. 1) The Carbonator is packed in a separate carton but it should arrive at the same time the machine does.
- Check machine and accessories for shipping damage.

The above unpacking and checking procedures should be performed immediately upon arrival of each machine. If damage or a shortage is found, a claim should be filed with the carrier.

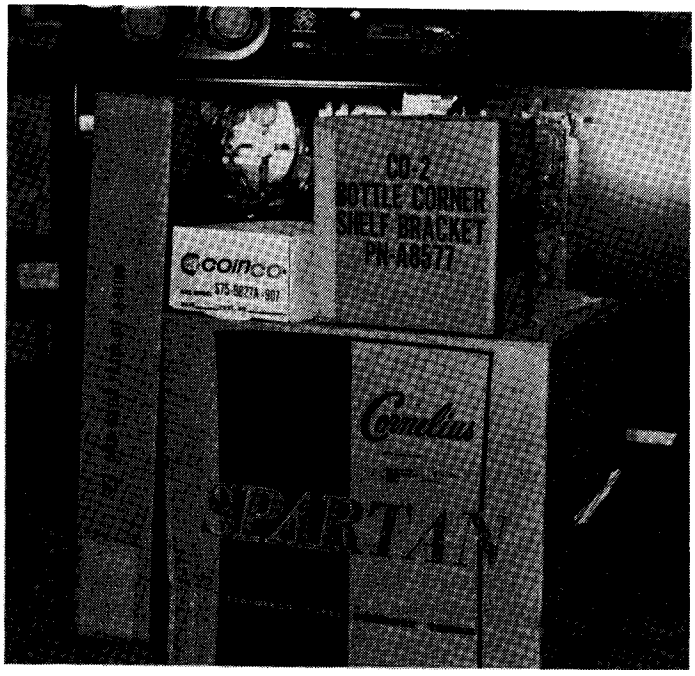

Fig. 1
***CO2 Shelf**
***Regulator/Gauges**
***Tanks**
(Water Filter Kit—optional)

THE REFRESH SYSTEM

This post-mix system requires three ingredients in order to dispense a drink. These are a potable water supply, CO2 bottled gas, and concentrated syrup. The water supply is connected to the carbonator where it is pumped at about 200 pounds into the tank and dispersed and saturated with CO2 gas. The CO2 is supplied by the use of a 20 pound refillable cylinder. Various regulators control the CO2 from bottle pressure to that required for the particular usage. The CO2 is supplied to the carbonator at about 100 pounds. The CO2 is also used at the syrup tanks to push the syrup to the dispense valves. Sixty pounds pressure is required for sugar type syrup and about 5 pounds for the diet syrup.

An ice water bath is used to cool both the syrup and carbonated water before it reaches the dispense valves. This is a closed water bath and requires initial and periodic filling with water for proper operation.

The dispense valves mix and allow flow of the pressurized syrup and carbonated water. Flow regulators allow just the proper amount of each to be released for the time specified. This ratio of syrup to water (Brix) is critical to the quality of the drink dispensed.

The flow diagram on the next page should be reviewed before installation procedures begin. The diagram shows the flow of water, CO2 gas, syrup, and carbonated water. The major components are shown with their related lines attached for reference. The regulator/gauge assemblies are also shown with their proper pressure settings. This diagram can also be referred to as a final check after the refresh unit as been installed.

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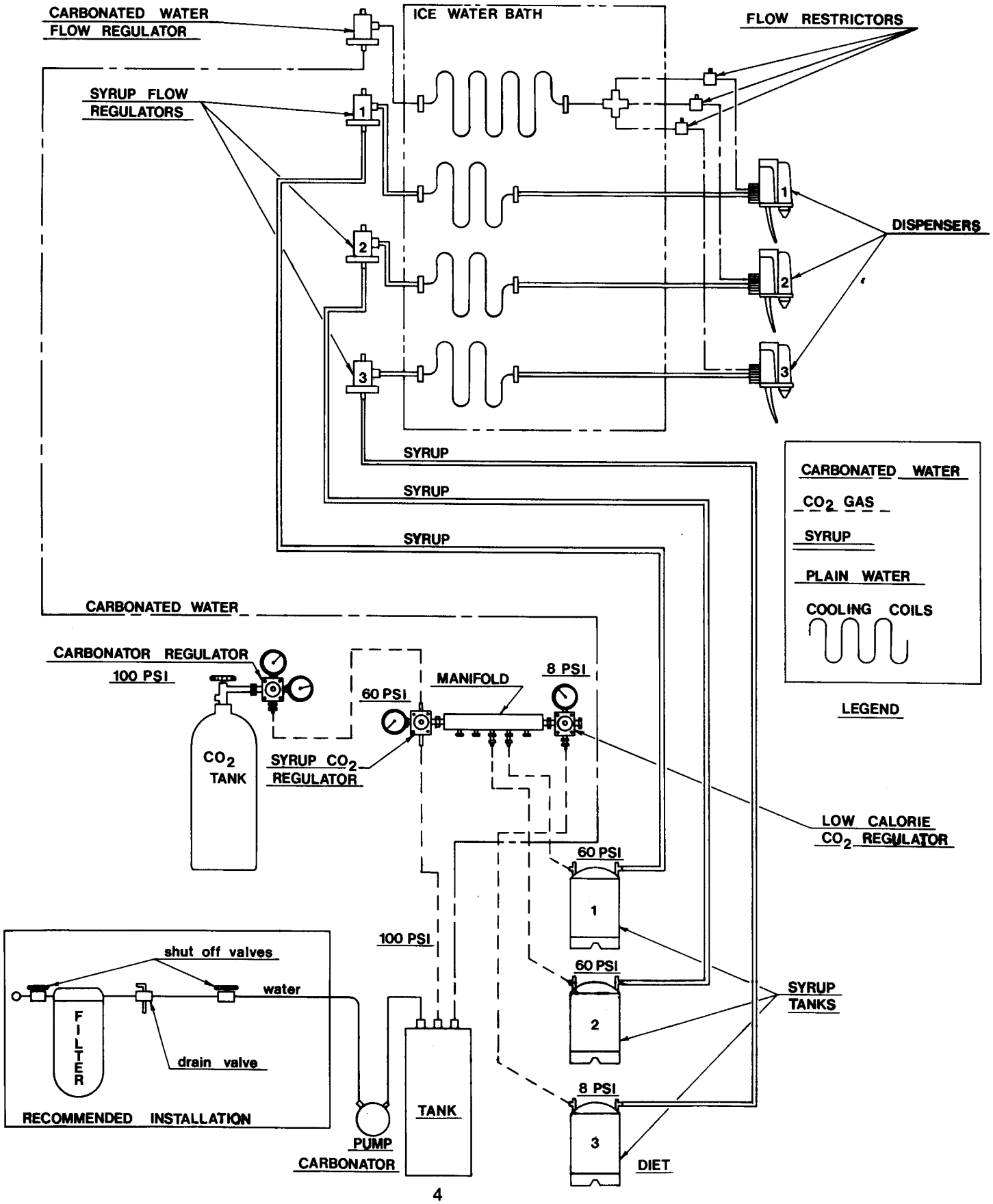
FLOW DIAGRAM



INSTALLATION

The sequence listed below describes a recommended step-by-step procedure for installation. The actual sequence used will vary depending on individual company procedures and customer demands. Because of the time involved, the first concern should be to fill the ice bath with water and plug the machine into a 115V source, so the ice bank can be formed. The ice bank must be stable before the water/syrup ratio (Brix) can be adjusted properly.

- Remove front cowling by prying forward until magnet clip releases, then lift cowling up to clear dispenser valves.
- Open upper cabinet doors
- Raise shelf in upper cabinet.
- Raise over head light fixture.
- Remove the metal plate covering the ice bank. (Four screws)
- Fill ice bank to overflow tube outlet. (Fig. 2)
- Plug dispenser power cord into receptacle inside the lower cabinet.
- Make sure compressor, condenser and agitator motors start to run.
- Replace cover to ice bank.
- Optional water filter installation: (Fig. 3) Use of filter is recommended by Polyvend. Filter used must have 100 gal/hr flow rate capacity.
  - Locate four holes on the rear of the machine which match the filter mounting bracket, and attach it with four #8 x ¼ type "B" screws.
  - Insert two #8 x ⅜ type "AB" screws in face of bracket.
  - Attach "L" shaped bracket to the center of the filter.
  - Hang-assembly on mounting bracket.
  - Install ⅜" MPT x ⅜ flare fittings (not included) into the head.
  - Bring inlet and outlet tubing to the head and attach. (Make sure water will flow in direction of arrow on filter head.)
  - Install quick change cartridge.
  - Turn on water. Flush with 5 gallons of water and shut off at filter.
- CO2 cylinder and carbonator installation

  CAUTION: Bottled CO2 can be a very hazardous material if not handled and transported properly. If unfamiliar with characteristics, request additional information from local sources or Polyvend.
  - Unpack boxed shelf and remove three ¼ x 20 screws in righ back side of lower compartment.
  - Place shelf in position with mounting to the back and up in reference to shelf platform.
  - Align holes and secure with screws removed earlier.
  - Unpack the high pressure CO2 cylinder regulator/gauges. (Boxed for shipment).
  - Unscrew the protector cap from the CO2 cylinder valve. Open the CO2 valve **slightly** counterclockwise to blow out any dirt or dust from the outlet fitting. Close valve.

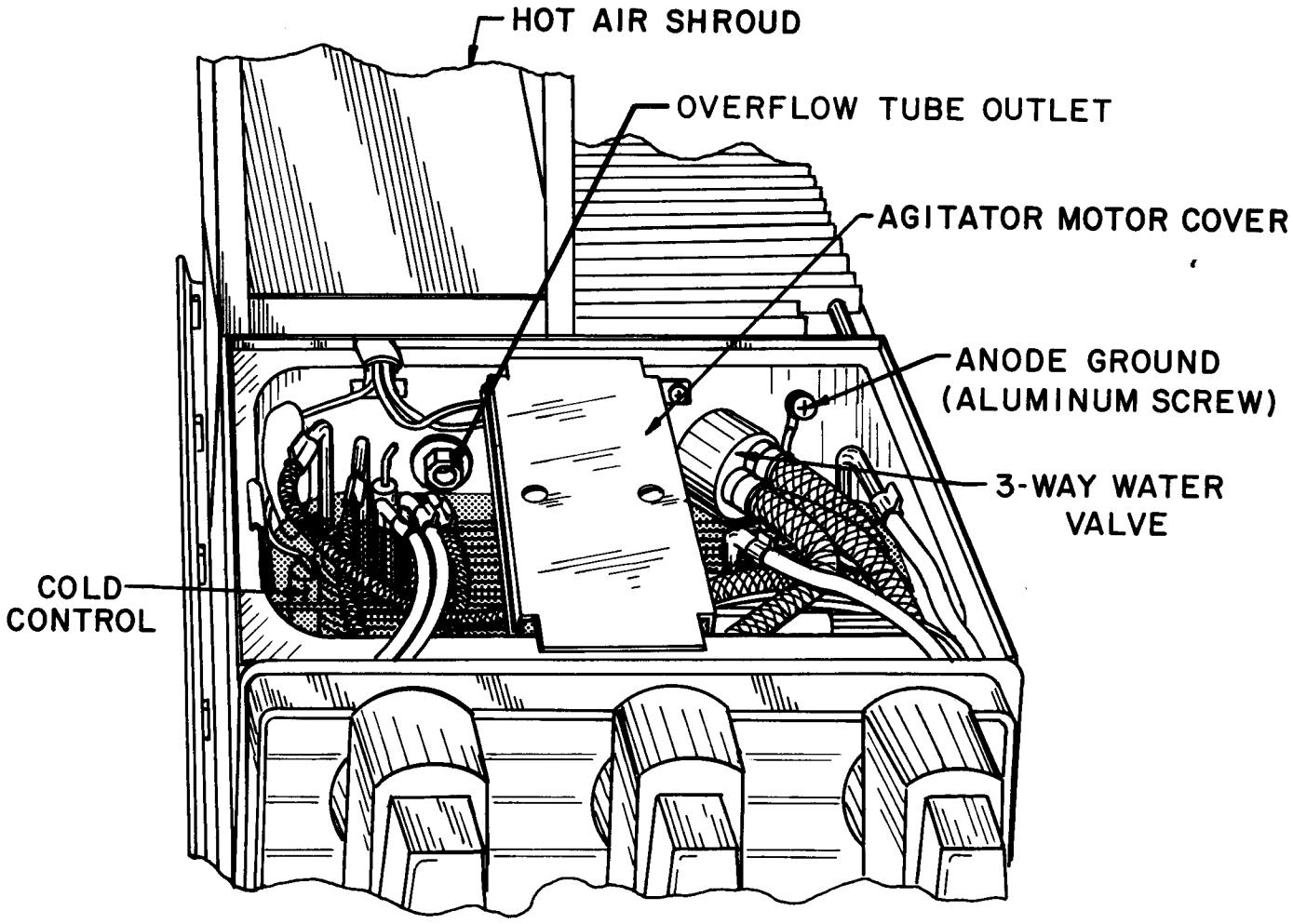

HOT AIR SHROUD
OVERFLOW TUBE OUTLET
AGITATOR MOTOR COVER
ANODE GROUND
(ALUMINUM SCREW)
3-WAY WATER
VALVE
COLD
CONTROL

Fig. 2

- Remove the shipping plug from the CO2 regulator coupling nut and make sure that there is a gasket in place. Install regulator on CO2 cylinder so that gauges can be easily read. Tighten the coupling nut. (FIG. 4)
- Place the CO2 cylinder in the back right hand corner on shelf provided and secure with chain provided.
- Remove two screws from the top of the carbonator and lift the cover off. Remove the shipping insert.
- Be sure that the tapered gasket is in the swivel nut of the inlet water tube assembly and attach the tube assembly to the ⅜ inch flare fitting marked "water inlet" on the carbonator.
- Connect CO2 to the carbonator by being sure that the white tapered gasket is in the swivel nut of the outlet line extending from the bottom of the CO2 regulator (with 160 PSI gauge) on the cylinder. Connect this line to the ¼ inch flare fitting marked "CO2 Inlet" on the carbonator.
- Connect the carbonated water outlet line to the carbonator which is attached to the inlet fitting of the carbonated water flow regulator (black) located on the manifold on the left hand inner panel of the bottom compartment. Attach the line to the ¼ inch flare fitting marked "C/W Outlet" on carbonator.
- Position carbonator in lower left hand side of bottom compartment so that the inlet water tube assembly sticks out of the grommeted hole in the back of the cabinet.
- Attach carbonator to filter, or to a potable water supply capable of supplying 100 gallons of water per hour. Do not turn on water supply at this time.

NOTE: *LOWER FLOW RATE WILL CAUSE PUMP TO OVERHEAT CAUSING PUMP AND LINE DAMAGE.*

If the pressure exceeds 75 PSI, a pressure regulator kit is recommended. If flow rate is inadequate, a low water flow kit is recommended.

- Be sure that the line has been flushed out to remove impurities, shavings, solder, etc. before connecting to CSV—3.
- Fully open CO2 cylinder valve counterclockwise at this time to backseat the valve and prevent CO2 loss.
- Turn adjustment screw of syrup tanks CO2 regulator (with 100 PSI guage) clockwise until guage reads 60 PSI. If a low calorie drink is to be dispensed, turn the adjusting screw on the regulator at the front, (60 PSI) gauge of the manifold until it reads 5-10 PSI. Dispenser number 3 on the left is used for low calorie drinks.
- Close CO2 regulator and watch all gauges for constant pressure . If drop is noted check for CO2 leaks (Page 15)

NOTE: *MAKE SURE HOSE NUMBER 1 IS CONNNECTED TO FLAVOR NUMBER 1 (USUALLY COLA), LINE 2 TO FLAVOR NUMBER 2 AND LINE 3 TO FLAVOR NUMBER 3 WHICH IS THE LOW CALORIE DRINK. IF NO LOW CALORIE DRINK IS TO BE DISPENSED, SET THE FRONT CO2 REGULATOR AT 60 PSI ALSO.*

- Turn on water supply to carbonator. If water can be heard trickling into the carbonator tank, the water pressure is too high, pressure regulator should be installed.
- Reopen CO2 cylinder valve all the way counterclockwise.
- Plug in carbonator to 115 VAC at Junction Box inside Lower Cabinet.
- Adjust carbonator tank liquid level if necessary.

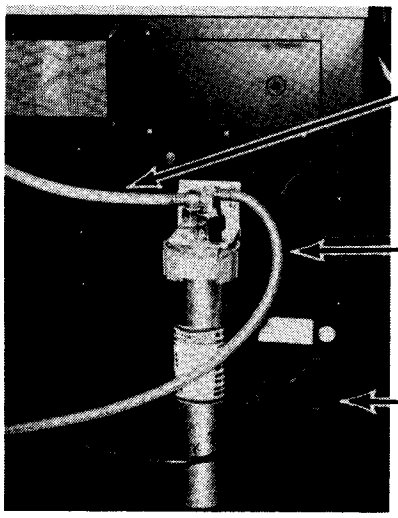

Hose #2: Filter to Carb. Pump
Hose #1: Water into Filter
Route Hose #2 Through Hole

Fig. 3

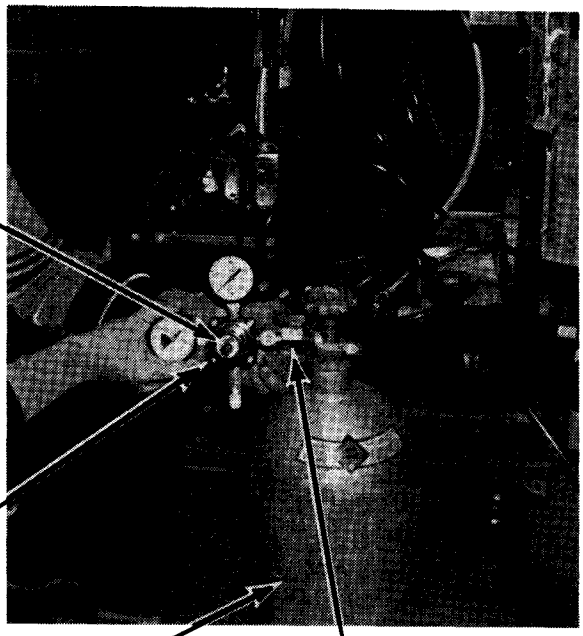

Adjusting Screw
Regulator/gauge
CO2 Tank
Swivel Nut

Fig. 4

ADJUSTING CARBONATOR LIQUID LEVELS

NOTE: *The carbonator liquid levels (pump cut-in and cut-out) were set at the factory and should not need adjustment. However, if an incorrect setting is suspected, check and make any necessary adjustments as follows:*

- When pump cycles off, unplug carbonator assembly power cord from 115 VAC electrical outlet box inside cabinet.
- Open dispensing valve and completely drain carbonator water into a container graduated in ounces. Total measurement should be 45 to 55 ounces.
- Plug carbonator assembly power cord into 115 VAC electrical outlet box inside cabinet and allow tank to fill until pump cycles off.
- Open dispensing valve and drain off carbonated water in graduated container until pump cycles on, then immediately release dispensing valve. Total volume dispensed (differential) should be 14 to 16 onces of carbonated water.

WARNING

TO AVOID POSSIBLE ELECTRICAL SHOCK WHICH MAY CAUSE SERIOUS INJURY OR DEATH, UNPLUG CARBONATOR ASSEMBLY POWER CORD FROM 115 VAC ELECTRICAL OUTLET BOX INSIDE CABINET BEFORE MAKING ANY SWITCH ADJUSTMENT.

- If adjustment of carbonator liquid level is necessary, refer to carbonator manual.

PRODUCT LOADING

Product loading is simply the loading of the product tanks with syrups. When loading for the first time, it is advisable to check the system out to be certain that all lines are connected properly.

The syrup lines are numbered to correspond with the dispensing valves they service. The number one (1) valve is located on the right when facing the unit, (2) two is the center valve and the low calorie drink valve, (3) is to the left. On the flow regulator bracket, the syrup flow regulators are **white** and the carbonated water flow regulator is **black.** Facing the flow regulator bracket (mounted just below the CO2 manifold on the left inner side panel of the lower compartment) the No. 1 line should be connected to the first white regulator on the right, No. 2 to the center one and No. 3 to the left hand white flow regulator. Make sure all lines are tight.

Refer to the flow diagram for the entire system. Starting with the CO2 cylinder, carbon dioxide gas is fed through a carbonator pressure regulator and from there to a second manifold pressure regulator which controls the pressures in the syrup tanks. The higher pressure CO2 is passed by the second regulator and is supplied to the carbonator. Three lines from the manifold supply CO2 to the syrup tanks through red, nozzle shaped quick disconnects having grey center caps. (**Caution:** If center caps are black on these connector **from the CO2 manifold,** the lines are wrong.) The same quick disconnect fittings having black center caps are used as supply lines **from** the syrup tanks to the syrup flow regulators. All fluids passing through the flow regulators travel through separate cooling coils in the ice water bath just behind the dispensing valves. Separate syrup lines connect to **each** dispensing valve and the carbonated water supply is coupled to **all** dispensing valves.

- To prepare syrup tanks:
  - Unpack syrup tanks.
  - Remove tank lids by pulling up on the wire latches. When the wire latch is released, the cap must be rotated 90° and the end angled upward to remove. Make sure the large "O" ring seal is removed with the lid.
  - Clean and sanitize the syrup tanks and lids.
  - Fill syrup tanks with product and label each tank. (Cola, orange, diet, etc.)
  - Wet "O" ring on tank lid with water and reinstall lid on filled tank. NOTE: *Allow about three (3) or four (4) inches of air space at top of tank when tank is full.)*
  - To lock in place, press down on wire latch until it is flat against tank top.
  - Connect syrup and CO2 gas lines to respective tanks.
  - Refer to page 11 for proper syrup to water settings (Brix).
  - For subsequent refilling of syrup tanks, use gray pressure relief cap to relive CO2 pressure from syrup tank.

BRIX TESTING

In order to assure a satisfactory drink, syrup and carbonated water must be combined at the dispenser nozzle in proper proportions. Usually this mix is a 5 to 1 ratio of water to syrup. This applies to both sugar and diet syrups. Occasionally, this mix must be tested to assure a good quality product.

To test brix, use a brix cup. This cup has three chambers. The central chamber is for carbonatd water. The two side chambers are for syrups. Use the center and right hand chamber for a 5 to 1 ratio.

Access for brix testing is gained by turning one of three nozzle tips slightly to free it and pulling down. They should come off easily. Next, pull the small rubber cap from the center tube. Insert the "S" shaped diverter tube through the nozzle tip and onto the small tube. Refit the nozzle tip.

With syrup tank disconnected, vend carbonated water and check for a 4 second dispense time. If time of dispense must be corrected to 4 seconds, turn the adjusting screw on timer counterclockwise to increase time and clockwise to decrease time. With dispense time set at 4 seconds, adjust (black) water flow regulator to throw approximately 5 oz. of CO2/water.

This selection is now ready for brix testing and second adjustment if necessary. Holding the large portion of brix cup under the nozzle and the **correct** syrup chamber under the "S" tube, dispense one drink. Filling of the brix cup chambers should rise together. If the large chamber fills ahead of the syrup chamber, turn the bottom screw of that syrup flow regulator valve to the related syrup tank clockwise to increase syrup flow. If syrup flows faster than the carbonated water, turn the same screw counterclockwise.

After completing the brix test on each nozzle, replace the rubber cap and the nozzle tip on each. Proper mix is now available at each nozzle.

The total amount of dispensed drink can now be adjusted by turning the screw on the timer counterclockwise for more and clockwise for less. (See cabinet detail).

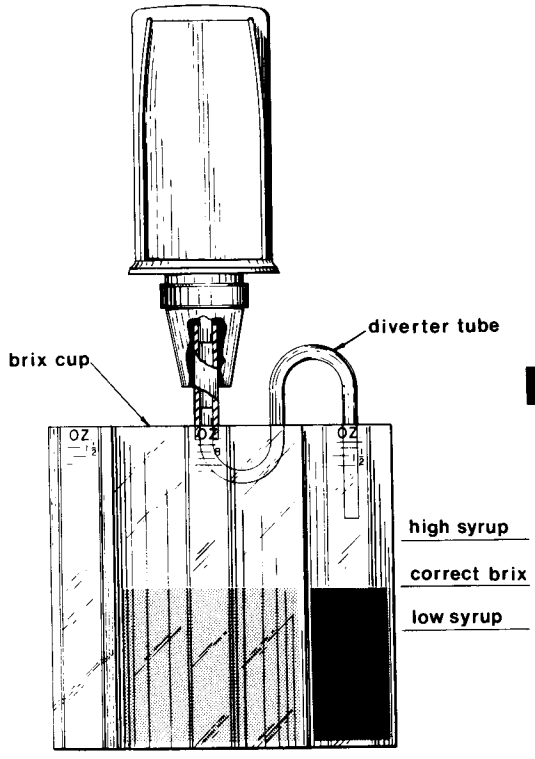


Fig. 6

CLEANING AND SANITIZING

Cleaning and sanitizing the CSV—3 can be reduced to that which should be done each time it's serviced; that which would be done for periodic sanitizing; and that which must be done for machine maintenance and protection.

Each time the machine is serviced:
- Clean the drip tray. (Use a mild detergent or carbonated water)
- Clean the cup rest. (Use a mild detergent or carbonated water)
- Clean the dispenser nozzle tips. (Turn off or disconnect syrup and use carbonated water.)

All of these items would otherwise accumulate syrup deposits leading to an unsanitary condition.

A periodic sanitizing program should be set up by each operation to meet the local or national food equipment sanitizing codes. Since these codes vary, this manual is written to define **how** to sanitize the machine and suggests that each operator schedule the frequency to comply with the applicable codes. Sanitizing the CSV—3 consists of:

- Unplug dispenser, carbonator and lamp cords from the 115 VAC power. Then turn off the water supply.
- Note pressure reading on the carbonator CO2 regulator gage, then turn regulator adjusting screw out (counterclockwise) until gage reads O PSI.
- Relieve carbonated water system pressure by removing two machine screws securing carbonator cover, then remove cover. Pull up on relief valve on top of carbonator cover, then remove cover. Pull up on relief valve on top of carbonator tank to allow all CO2 as to escape to the atmosphere.
- Disconnect lines from all syrup tanks.
- Turn free vend switch to free vend.
- Fill clean, empty syrup tank with warm (140° f) water and install cover. Connect CO2 line to inlet and any syrup line to outlet. Flush all syrup lines with at least ½ gallon of water.
- Fill clean, empty syrup tank with sanitizing solution. Connect CO2 line to inlet and syrup line to outlet. Open the dispenser valve and let it run until only sanitizing solution is dispensed. Repeat for each dispenser.

  NOTE: *Strength of sanitizing solution and time the solution is in contact with the dispensing system components should be as specified by the sanitizer manufacturer.*
- Allow sanitizing solution to stand in systems for the recommended contact time as given by sanitizer manufacturer.
- After contact time has elapsed, fill a clean syrup tank with water. Attach CO2 line to inlet and syrup line to outlet. Flush each dispensing system in turn with at least ½ gallon of water, in accordance with sanitizing solution manufacturer's instructions.
- Wash syrup line disconnects and tank outlet fittings in warm water and connect to the proper syrup tanks. Open dispenser valves until syrup flows through each valve.
- Turn adjusting screw clockwise on carbonator regulator until gage reads pressure noted previously. Pull up on carbonator tank relief valve for 3 seconds to remove trapped air from the tank. Reinstall carbonator cover using the two screws.
- Turn on inlet water supply.
- Reconnect all power plugs.
- Actuate a dispenser until carbonator cycles on.
- Throw free vend switch to "off" position.
- Check water to syrup ratio (Brix) of product from each valve as outlined under BRIX TESING (page 11).

SPECIAL MAINTENANCE (See FIGURE 4)

WARNING

The Carbonator water strainer screen and dual check valve must be inspected and serviced at least once each year under normal circumstances, and after any water supply disruption that could cause stoppage or erratic flow through the system. A carbonator with no screen, or a defective screen in the strainer would allow foreign particles to foul the dual check valve. CO2 gas could then back flow into the water system and create a health hazard.

To perform maintenance on the carbonator water strainer screen:

- Unplug carbonator assembly power cord from 115 VAC power inside the cabinet.
- Close (clockwise) the CO2 cylinder valve, then turn off the water supply to the carbonator.
- Remove two machine screws and cover from the carbonator.
- Pull up on carbonator tank relief valve to relieve system pressure.
- Disconnect all three lines from the carbonator fittings, save all gaskets and remove carbonator from the cabinet.
- Loosen screen retainer and pull retainer and screen from pump.
- Pull screen from retainer. Clean any sediment from retainer and retainer port of pump.
- Clean screen and inspect. If there are holes, corrosion or other damage visible, replace with a new screen.
- Check O-ring on screen retainer. Replace worn or damaged O-ring.

WARNING: FAILURE TO USE SCREEN CAN CAUSE DAMAGE TO DUAL CHECK VALVE.

- After replacing screen in retainer, replace in water pump and tighten securely.
- Loosen pump-to-motor coupling screw and turn pump counterclockwise (viewed from top of carbonator) for access to dual check valve connections.
- Disconnect water inlet line to tank from dual check valve, then unscrew dual check valve from elbow in pump outlet. Save white tapered gaskets in tube assembly nut and inlet (female) end of dual check valve.
- Disassemble each check valve as shown in FIGURE 5.
- Wipe each part with a clean, lint free cloth, and inspect each part, especially the ball, for burrs, nicks, corrosion, deterioration, and other damgage. Discard ball seat and any damaged or questionable parts. Replace with new parts.
- Reassemble the check valves (FIGURE 5). ALWAYS INSTALL NEW BALL SEAT. Wet O-ring with clean water for easier assembly.
- Install white tapered gasket in female inlet of one check valve, then screw valve on elbow in pump outlet port.
- Install white tapered gasket in female inlet of second check valve and connect it to the first one.
- Install white tapered gasket in swivel nut of water line to tank, then connect nut to outlet of second check valve.
- Rotate pump clockwise back to its original position and tighten screw on pump-to-motor coupling, until assembly will not move.
- Place carbonator in cabinet, recoupling the three lines and using the saved gaskets or new ones if necessary.

- Open CO2 valve slightly to fill lines and then open it fully to backseat the valve and prevent CO2 gas leakage. Check for leaks and tighten loose connections.
- Open relief valve on carbonator tank for 3 seconds to bleed off trapped air.
- Turn on water supply, then re-insert power cord into 115 VAC source. Open all three dispensing valves until all air is purged from the lines and the carbonator cycles two or three times.
- Check for leaks and tighten loose fittings.

- Replace Carbonator Cover.
  - Record date of servicing on carbonator cover.

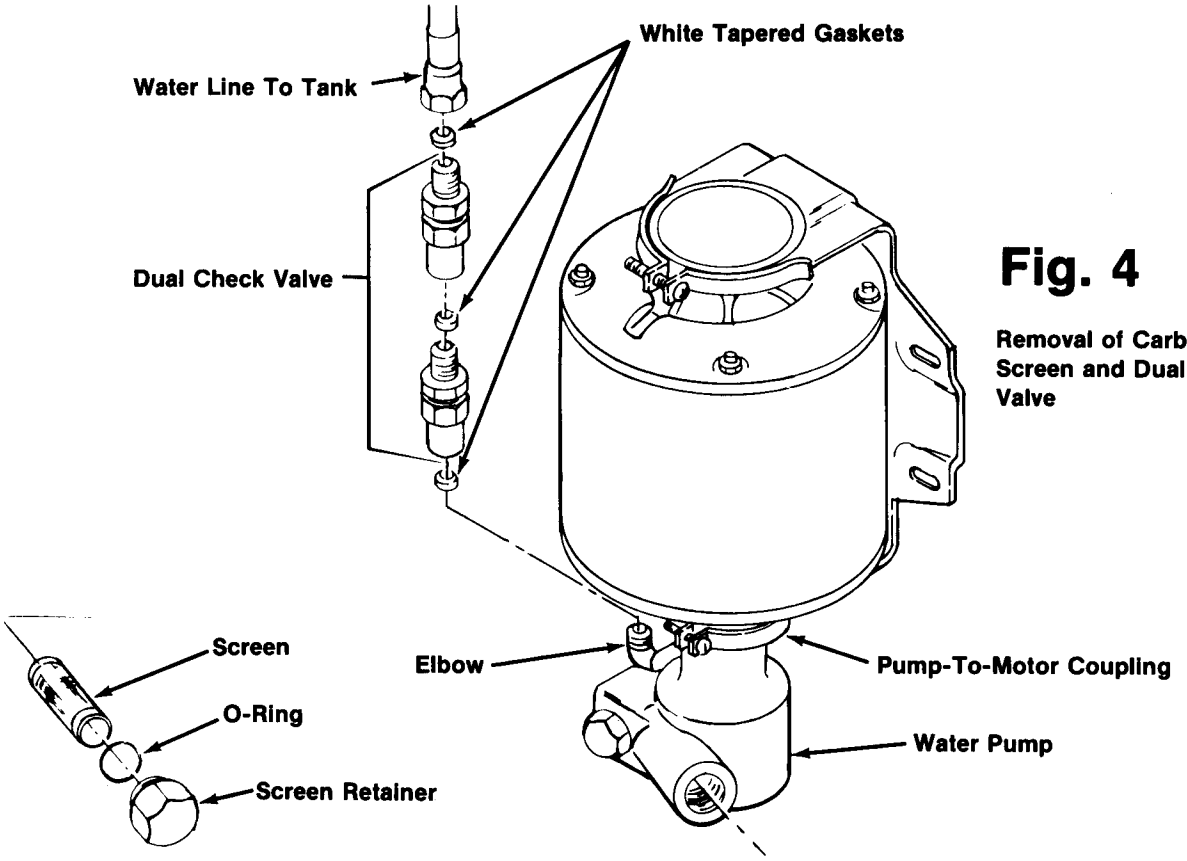


Fig. 4

Removal of Carbonator Screen and Dual Check Valve

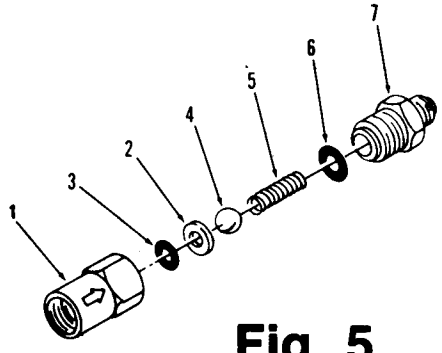


Fig. 5

LEGEND

1. **Housing**
2. **Flat Washer, Stainless Steel**
* 3. **Ball Seat**
4. **Ball**
5. **Spring**
6. **O-Ring**
7. **Retainer**

CO2 LEAK CHECK PROCEDURES

- Regulator Body Vent Hole CO2 Leak Check. (FIGURE 6)
  - With syrup CO2 regulator (100 - psi gage) set at 50-psi, carbonator CO2 regulator (160 - psi gage) set at 100-psi, and low calorie drink syrup CO2 regulator (60 - psi gage) set at 7-psi; perform vent hole CO2 leak check by performing the following steps:
    - Place finger over vent hole below adjusting screw on syrup CO2 regulator. A pressure rise on 100-psi gage indicates a CO2 leak at poppet. Stable gage indicates no leak.
    - Place finger over vent hole below adjusting screw on carbonator CO2 regulator. A pressure rise on 100-psi gage indicates a CO2 leak at poppet. Stable gage indicates no leak. If CO2 leak is detected at vent hole of either syrup CO2 regulator with 100-psi gage or carbonator CO2 regulator with 160-psi gage, close valve (clockwise) on CO2 cylinder. Turn out (counterclockwise) adjusting screws on both CO2 regulators until gages read O-psi. Loosen coupling nut slightly on CO2 cylinder to relieve CO2 pressure on high pressure side of regulator assembly, then retighten. Install new poppet assembly in faulty regulator. Refer to **CAUTION** in this step and open CO2 cylinder valve. Turn in (clockwise) adjusting screws on both CO2 regulators until 100-psi gage reads 50-psi and 160-psi gage reads 100-psi. Recheck for leak.
    - Place finger over vent hole below adjusting screw on low calorie drink syrup CO2 regulator. A pressure rise on 60-psi gage indicates a CO2 leak at poppet. Stable gage indicates no leak.

      If CO2 leak is detected at vent hole low calorie drink syrup CO2 regulator with 60-psi gage, turn out (counterclockwise) adjusting screws on syrup CO2 regulator with 100-psi gage and low calorie drink syrup CO2 regulator with 60-psi gage until gages read 0-psi. Install new poppet assembly in faulty regulator. Refer to **CAUTION** in this step and open CO2 cylinder valve. Turn in (clockwise) adjusting screws on both CO2 regulators until 100-psi gage reads 50-psi and 60-psi gage reads 7-psi. Recheck for leaks.

CAUTION

Open (counterclockwise) CO2 cylinder valve slightly to allow lines to slowly fill with gas, then open fully to back-seat valve. (Back-seating valve prevents leakage around shaft).

CO2 Leak Check, High Pressure Side of CO2 Regulator Assembly.

- Turn out (counterclockwise) adjusting screws on syrup and carbonator CO2 regulators until 100-psi and 160-psi gages read 0-psi.
- Close valve (clockwise) on CO2 cylinder and observe 2000-psi gage for pressure drop. If pressure drop is observed, proceed with the following steps:
- Use soap water solution and check the following for leaks:
  - Apply soap water solution all over CO2 cylinder valve and if leaking around valve stem, try back-seating. If leak **still** persists, attach tag noting findings and replace CO2 cylinder.
  - Soap regulator coupling nut where it connects to CO2 cylinder. Make sure washer is inside coupling nut.
  - Soap CO2 inlet coupling nipple threads, where it enters CO2 regulator.
  - Soap threads on nipple between regulator bodies.
  - Soap threads on 2000-psi gage and where brass fitting enters gage body.
  - Soap threads on seat retainers located on rear of regulator bodies.
- After leak is located and corrected, open CO2 cylinder valve. Turn in (clockwise) adjusting screws on both CO2 regulators until 100-psi gage reads 50-psi and 160-psi gage reads 100-psi.

- Syrup or Carbonated Water Systems, CO2 Leak Identification Procedures. To determine if CO2 leak is in carbonated water system or syrup system, perform the following:
  - Turn out (counterclockwise) adjusting screw on syrup CO2 regulator until 100-psi gage reads 0-psi. Close valve (clockwise) on CO2 cylinder and observe carbonator 160-psi gage for pressure drop. If pressure drop is observed, proceed with the following steps:
  - Use soap water solution and check the following for leaks:
    - Soap check where 160-psi gage threads enter carbonator CO2 regulator body and where brass fitting enters body of gage.
    - Soap CO2 tube assembly swivel nut connection and check valve on outlet of carbonator CO2 regulator.
    - Soap swivel nut connection where CO2 tube assembly connects to CO2 inlet on bulkhead of carbonator assembly.
    - Remove two machine screws and carbonator assembly cover. Soap CO2 inlet check valve located on bulkhead of carbonator assembly.
    - Soap CO2 inlet swivel nut connection and relief valve on carbonator tank.
    - After leak is located and corrected, open CO2 cylinder valve. Turn in (clockwise) adjusting screw on syrup CO2 regulator until 100-psi gage reads 50-psi.
- Syrup System, CO2 Leak Check
  - Turn out (counterclockwise) adjusting screw on carbonator CO2 regulator until 160-psi gage reads 0-psi. Close valve (clockwise) on CO2 cylinder and observe 100-psi gage for pressure drop which indicates a CO2 leak in syrup system. Perform the following steps to locate CO2 leak:
    - Remove quick disconnects from inlet fittings on syrup tanks. Wash and immerse each one in plain water while watching for bubbles which indicate a leak. Note syrup regulator 100-psi gage and if pressure drop is still present, proceed to next step. If pressure drop is eliminated, reconnect quick disconnects to syrup tanks. Watch for bubbles indicating a leak, and apply soap water solution to quick disconnects and inlet tank fittings. Use plain water and check for bubbles around tank lids and relief valves. After leak has been located, repair as necessary.
    - Reconnect syrup tank inlet quick disconnects. Use soap water solution and check the following for leaks:
      - Soap check all threads, plugs, CO2 check valves, and swivel nut inlet and outlet connections on CO2 manifold.

NOTE

If a leak is observed at CO2 manifold threads, remove fitting and clean off old sealing compound. Apply teflon tape (thread lubricant and sealant) to threads of fitting and reinstall in CO2 manifold. If leak is observed at inlet or outlet swivel nut connections on CO2 manifold, tighten or replace gaskets as necessary.

- Soap check CO2 tube assembly swivel nut connection and where brass adapter fitting enters outlet of syrup CO2 regulator body with 100-psi gage.
- Soap check where 100-psi gage threads enter syrup CO2 regulator body and where brass fitting enters body of gage.
- Soap check CO2 tube assembly swivel nut connection and check valve on outlet of low calorie drink syrup CO2 regulator with 60-psi gage.
- Soap check CO2 tube assembly swivel nut connection and where brass adapter fitting enters inlet of syrup CO2 regulator body with 60-psi gage.
- After leak is located and corrected, open CO2 cylinder valve. Turn in (clockwise) adjusting screw on carbonator CO2 regulator until 160-psi gage reads 100-psi.

NOTES

OPERATION

1. A credit is established on the electronic timer through the coin mechanism or by the free vend button if the free vend switch is activated.

2. The electronic timer then sends power to the product switches.

3. Depression to the product dispensing lever activates the product solenoid and reduces time on the electronic timer.

4. After set time has expired the electronic timer shuts off power to the product switches.

5. If time is left on the electronic timer (partially expired) the timer will automatically reset itself when another credit is established, either through the coin mechanism or the free vend button.

ELECTRICAL

The CSV—3 carbonated beverage unit operates from a 115 VAC 60 cycle primary power source. The refrigeration, carbonator and lamp subsystems all operate from this primary supply and on an independent basis. A transformer is used to step this primary source down to 24 VAC 60 cycles for the coin mechanism, solid state timer, dispensing valves and indicator lights. Complete wiring diagram is shown in FIGURE 7.

This overall schematic of the CSV—3 is divided into five basic subsections related to specific locations within the unit. These are:

- Lamp (Top of Unit)
- Cooling and dispensing (Upper Cabinet)
- Solid State Timer Assembly (Lower Cabinet — Left Front)
- Carbonator Assembly (Lower Cabinet — Left)
- Control Panel (Front Lower Cabinet — Slanted Front)

The lamp assembly contains the ballast, starter and fluorescent tube with sockets. Lamps are changed by sliding the light diffuser up and back to gain access to the tube. The tube may then be replaced. Access to starter or transformer is obtained by raising the tilt away lamp assembly. Be sure to shut off power to the unit before changing these components.

Cooling and dispensing is accomplished by the dispensing head in the upper compartment. Remove the upper compartment magnetic panel for access to the head. There is a 115 VAC line connection from the head to a junction box in the rear of the lower compartment. In addition there is a three wire connector to the timer assembly, which serves to control the operation of the dispensers only. Operationally, an ice sensing probe in the ice bank controls a switch which turns the refrigeration unit on and off as required to maintain ice around the probe. As the compressor cycles on, the condenser fan motor is also operated. The agitator motor is connected directly to 115 VAC and runs continuously.

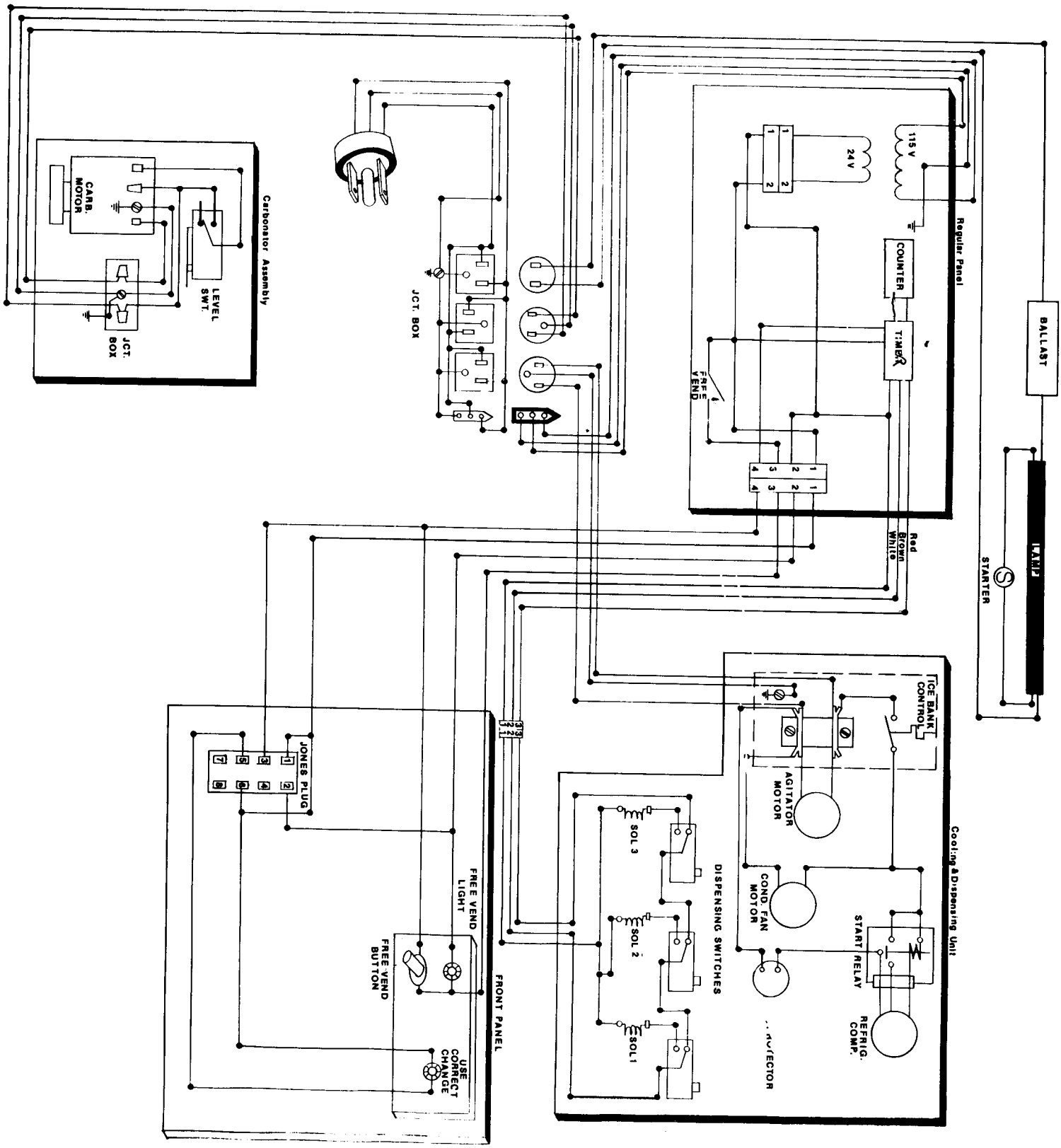

Carbonator Assembly
CARB. MOTOR
LEVEL SWT.
JCT. BOX
JCT. BOX
Regular Panel
115 V
24 V
COUNTER
TIMER
FREE VEND
BALLAST
LAMP
STARTER
Red
Brown
White
JONES PLUG
FREE VEND LIGHT
FREE VEND BUTTON
USE CORRECT CHANGE
FRONT PANEL
ICE BANK CONTROL
AGITATOR MOTOR
SOL 3
SOL 2
SOL 1
DISPENSING SWITCHES
COND. FAN MOTOR
START RELAY
REFRIG. COMP.
Cooling & Dispensing Unit

Fig. 7

REPAIR AND REPLACEMENT

- Dispenser
  - Dispensing Valve Head Assembly
    - Removal
      - Unplug power cord from electrical outlet box.
      - Remove cover, locking clip, cover frame, nozzle and collar, then disconnect and tag wiring for reassembly.
      - Loosen coupling nut with a Spanner wrench by turning clockwise and pull dispensing valve head assembly from unit.
      - If switch must be replaced, disconnect jumper wire from switch and remove two screws and lock washers to remove switch.
      - If solenoid must be replaced, disconnect jumper wire from solenoid, and remove two screws to remove solenoid.
    - Installation
      - Install electric dispensing valve by reversing removal procedure. Make sure wiring is correct (see applicable unit wiring diagram).
  - Compressor Overload Protector and Starting Relay.
    - Removal
      - Unplug main power cord.
      - Remove bale strap and terminal box cover from compressor.
      - Disconnect and tag lead from overload protector and lead from starting relay.
      - Unplug starting relay to remove relay and overload protector from compressor.
      - Disconnect jumper wires and remove overload protector from bracket on starting relay.
    - Installation
      - Install overload protector and starting relay by reversing removal procedure.
      - Make sure all wiring is correct (see applicable unit wiring diagram).
  - Agitator Motor.
    - Removal
      - Unplug main power cord.
      - Remove four screws from evaporator cover, then remove cover.
      - Remove two screws and remove control box cover.
      - Disconnect agitator motor wires from terminal block.
      - Remove agitator motor wires from insulating bushing at top of evaporator tank.
      - Remove two mounting screws and remove agitator motor and bracket assembly from unit.
      - Remove two screws, nuts, and spacers to remove agitator motor from mounting bracket.
    - Installation
      - Install agitator motor by reversing removal procedure.
      - Make sure all wiring is correct (see applicable unit wiring diagram).

- Condenser Fan Motor.
  - Removal
    - Unplug main power cord.
    - Remove two screws and remove control box cover.
    - Disconnect condenser fan motor wires from terminal block.
    - Remove two screws to loosen condenser bracket at fan end of condenser.
    - Lift loose end of condenser up for access to fan shroud mounting screws to remove condenser fan and shroud assembly from unit.
    - Remove retaining ring from fan blade and pull fan blade from motor shaft.
    - Remove two screws to remove condenser fan motor from shroud.
  - Installation
    - Install condenser fan motor by reversing removal procedure.
    - Make sure all wiring is correct (see applicable unit wiring diagram.)
- Ice Bank Control.
  - Removal
    - Unplug main power cord.
    - Remove four screws to remove evaporator cover, then pull control bulb up and out of retainer. Note where excess capillary tube is coiled and install capillary tube of new control in same way.
    - Remove two screws to remove control box cover.
    - Remove two control box mounting screws and lift control box assembly up and out of unit.
    - Remove two screws to disconnect wiring from ice bank control. Tag wires so wires can be reconnected as originally installed.
    - Remove two screws to remove ice bank control from control box.
  - Installation
    - Install ice bank control by reversing removal procedure and use following instructions.
      - Route ice bank control bulb and capillary tube through hole in side of control box. Be careful not to kink or rupture capillary tube during installation.
      - Coil excess capillary tube of ice bank control and position as originally installed. Make sure control bulb seats properly in retainer.
    - Make sure all wiring is correct (see applicable unit wiring diagram).
- Anode.
  - Removal
    - Unplug dispenser power cord from 115 VAC electrical outlet inside cabinet.
    - Remove four screws from evaporator cover, then remove cover.
    - Remove and retain aluminum screw securing anode connecting wire to evaporator tank.
    - Pull old anode up and out of evaporator tank. Make sure bottom rubber insulator has not fallen off anode and is still inside evaporator tank.

- Installation
  - Install new anode by reversing removal procedure and use following instructions.
    - Make sure rubber insulators, provided with new anode, are properly installed on anode.

CAUTION

Anode must be completely insulated from other metal components and only an aluminum screw must be used to secure its connecting wire to the evaporator tank. If anode is allowed to contact other metal parts, its effectivity will be destroyed, allowing corrosive action to take place on the evaporator tank.

- Carbonator
  - Level Control Switch.
    - Removal
      - Unplug carbonator assembly power cord from 115 VAC electrical outlet box in cabinet.
      - Remove two machine screws and lift cover off carbonator.
      - Remove two screws that attach cover to switch box and remove cover.
      - Remove two switch mounting screws, twin nut, and insulation strip. Do not disconnect wires from switch.
      - Pull switch with attached wires out and note terminal marking on red side of switch. Tag wires for reconnection to proper terminals then disconnect wires.
    - Installation
      - Install level control switch by reversing removal procedure.
      - Make sure all wiring is correct (see applicable unit wiring diagram).
  - Water Pump.
    - Removal
      - Unplug carbonator assembly power cord from 115 VAC electrical outlet box inside cabinet, then turn off water supply to unit.
      - Remove two machine screws and lift cover off carbonator.
      - Loosen screw on pump-to-motor coupling enough to remove pump from motor.
      - Disconnect water inlet line from pump inlet. Be careful not to lose black tapered gasket.
      - Disconnect dual check valve assembly from pump outlet. Be careful not to lose white tapered gasket.
    - Installation
      - Install water pump by reversing removal procedure and use following instructions.
        - Make sure applicable tapered gasket is installed at each connection.
        - Make sure drive tang on pump and slot in pump motor shaft are aligned.
        - Make sure tang and shaft are properly lubricated.
      - Turn on water supply, then plug carbonator assembly power cord into 115 VAC electrical outlet box inside cabinet.
      - Check unit for leakage during operation. Tighten any loose connections.

- Water Pump Motor
  - Removal
    - Unplug carbonator assembly power cord from 115 VAC electrical outlet box inside cabinet.
    - Remove two machine screws from carbonator cover, then lift cover off carbonator.
    - Loosen screw on coupling far enough to disconnect pump from motor.
    - Remove four screws and washers from back side of carbonator to remove motor.
    - Loosen two motor access plate screws and remove access plate.
    - Disconnect wires from terminals on motor and tag wires for reassembly.
  - Installation
    - Install pump motor by reversing removal procedure.
    - Make sure tang on pump and slot in pump motor shaft are aligned and properly lubricated.

NOTES

REFRIGERATION SYSTEM

WARNING: SERVICING OR REPAIR OF ANY CSV—3 REFRIFERATION SYSTEM IS A VIOLATION OF THE WARRANTY. SUCH SERVICE OR REPAIR SHOULD ONLY BE ATTEMPTED AFTER THE WARRANTY HAS EXPIRED.

As with any refrigeration system, servicing of the CSV—3 system requires special training and tools. Tools required include:

- A vacuum pump capable of pulling a negative 29 pounds per square inch vacuum.
- A set of diagnostic and charging gages with hoses and seals.
- Valves to be attached to the system for recharging.
- A tube cutter.
- A soldering torch.
- A gas flame or electronic leak detector.
- A supply of refrigerant. (R-12)
- A supply of refrigerant oil.

The refrigeration system is shown in FIGURE 8. It consists of:

- Compressor (1)
- Condenser (2)
- Evaporator (3)
- Capilary Control (4)
- Drier (5)
- Ice Bank Control (6)
- Condenser Fan. (7)

Operation consists of the electrically driven compressor compressing the R-12 freon to a high pressure and forcing it through the condenser where heat is removed and the R-12 converts to liquid from its normally gaseous state. Upon leaving the condenser, it passes through the drier where any moisture is continually removed by charcoal granules. At this point, a capilary tube is used to restrict the rate of flow of the liquified freon to the evaporator located inside the ice bank chamber.

As the expanding freon converts to a gas, it removes heat from the ice bank. The ice bank control temperature switch simply turns the compressor "on" or "off" as the temperature varies within the ice bank. The condenser fan aids in dissipating heat in the condenser by circulating air through the condenser coils.

- Test & Repair

The CSV—3 refrigeration system is very reliable, but any trouble would show up as lack of cooling in the ice bank. The first thing to check is whether or not the compressor will turn on. Facing the machine, there are three black leads going to two electrical terminals on the left rear side of the dispensing head. If there is no cooling, use a screwdriver to short between these two terminals.

- If shorting causes the compressor to cycle on, then the problem is in the ice bank control. To replace the ice bank control:
  - Disconnect connector from junction box to dispenser head (located in rear of bottom cabinet).
  - Remove four screws to remove evaporator cover, then pull control bulb up and out of bracket. (Note where excess capillary tube is coiled so that new tube can be installed the same way.

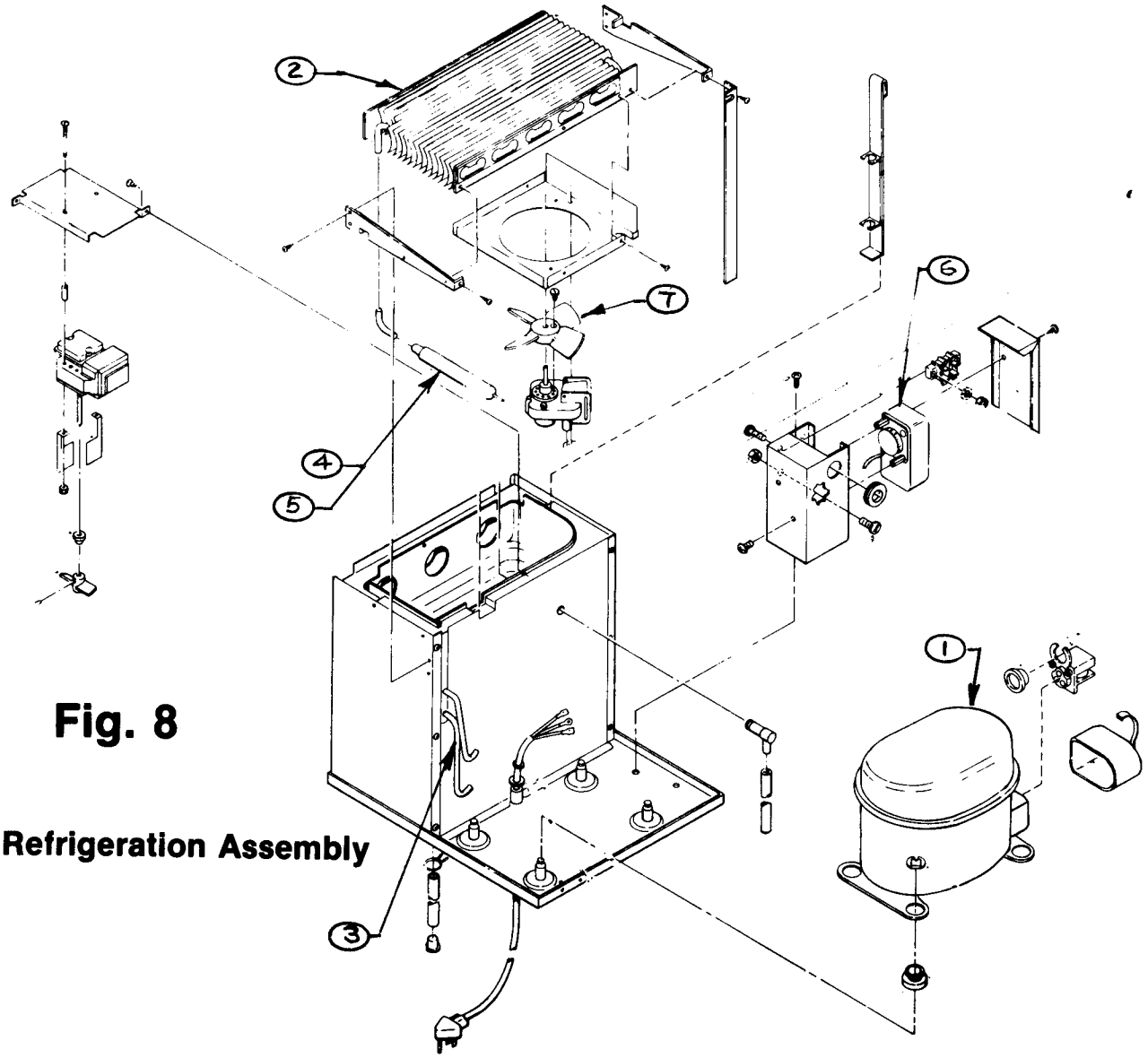


Fig. 8

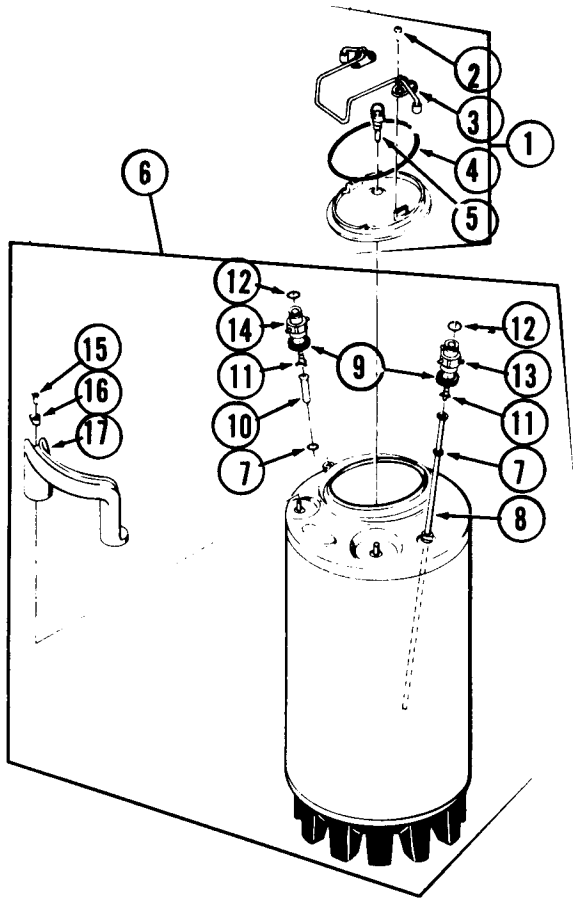
Refrigeration Assembly

- Remove two screws and control box cover.
- Remove two control box mounting screws and lift control box assembly up and out of the unit.
- Remove two screws to disconnect wiring from ice bank control. (Tag wires so they may be reconnected as originally installed.)
- Remove two screws to remove ice bank control from the box.

- If shorting does not cycle the compressor, then the problem is associated with the compressor or refrigeration system. It is desirable to check and replace (if necessary) the overload protector and starting relay, before attempting major repairs on the refrigeration system. Disconnect power to the head. Remove the plastic cover on the rear left side of the compressor by releasing the spring clip retainer. (A screwdriver will release the spring clip on each side.)
  - Reconnect power to the head. Force actuation of the starting relay using a plastic or non-conductive tool. If the compressor then runs, replace the starting relay.
  - Using an alligator clip lead, jump from one side of the overload protector switch to the other. If the compressor then runs, replace the thermal overload protector switch. If the compressor then does not **run,** the compressor motor must be repaired or replaced.

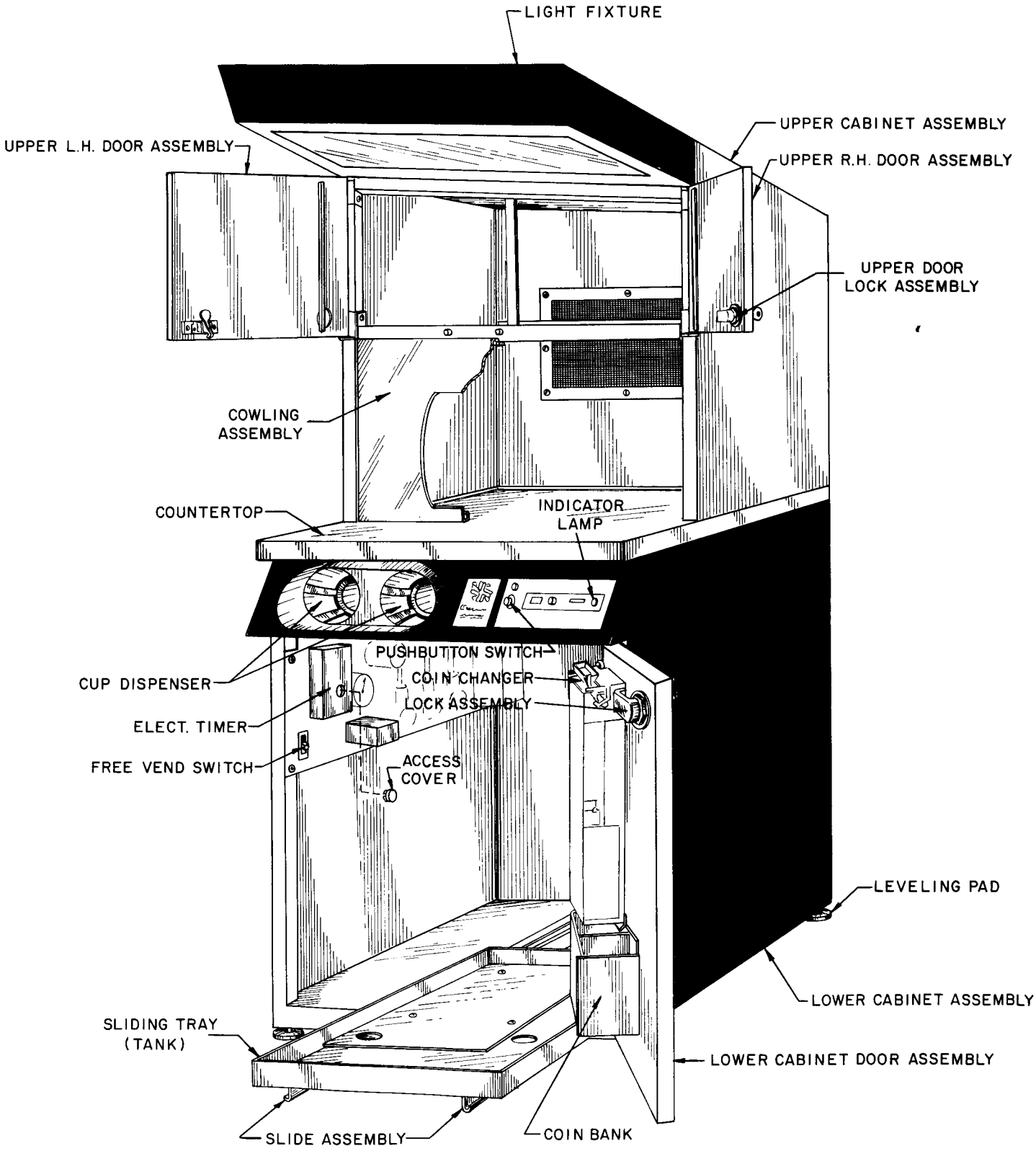
When all of the above tests are complete but cooling of the ice bank is insufficient with the compressor running, then it is certain that the refrigeration unit has lost its charge of R—12 or freon. Recharging may be accomplished using the tools listed at the beginning of this section.

- A tube cutter is used **with care** to remove the end of the copper tubing on the right and to the front of the compressor. Break the surface **gently** to prevent sudden decompression of the system. The moment a leak is heard, cease cutting until the system has reached atmospheric pressure. Minimize tubing removal.
- Attach an access valve to the ends of the tube to ease future servicing. This can be obtained from any air conditioning supply house and should be permanently attached using a soldered connection.
- Using the set of charging gauges, attach the low side to the new valves. Attach the center hose to the vacuum pump. Open the valve on the low pressure side of the gauges and start the vacuum pump. The fact that the freon has gone indicates a leak.
- After the vacuum pump has reached 28 to 29 pounds negative pressure, turn the vacuum pump off and close the valve on the low side of the gauge. The system should hold the same reading for one hour.
- If it doesn't, use a can of R-12 attached to the hose removed from the vacuum pump and fill the system. A leak detector can be used to determine where the leak is. Having found the leak, repair it by parts replacement or repair depending on where it is.
- Repeat the vacuum leak test.
- Rechange the system until the low pressure gauge reads 30 pounds while operating. Remove the gauges. The system is now functional. Check the temperature of the ice bank. It should measure 36° F.



SYRUP TANK ASSEMBLY

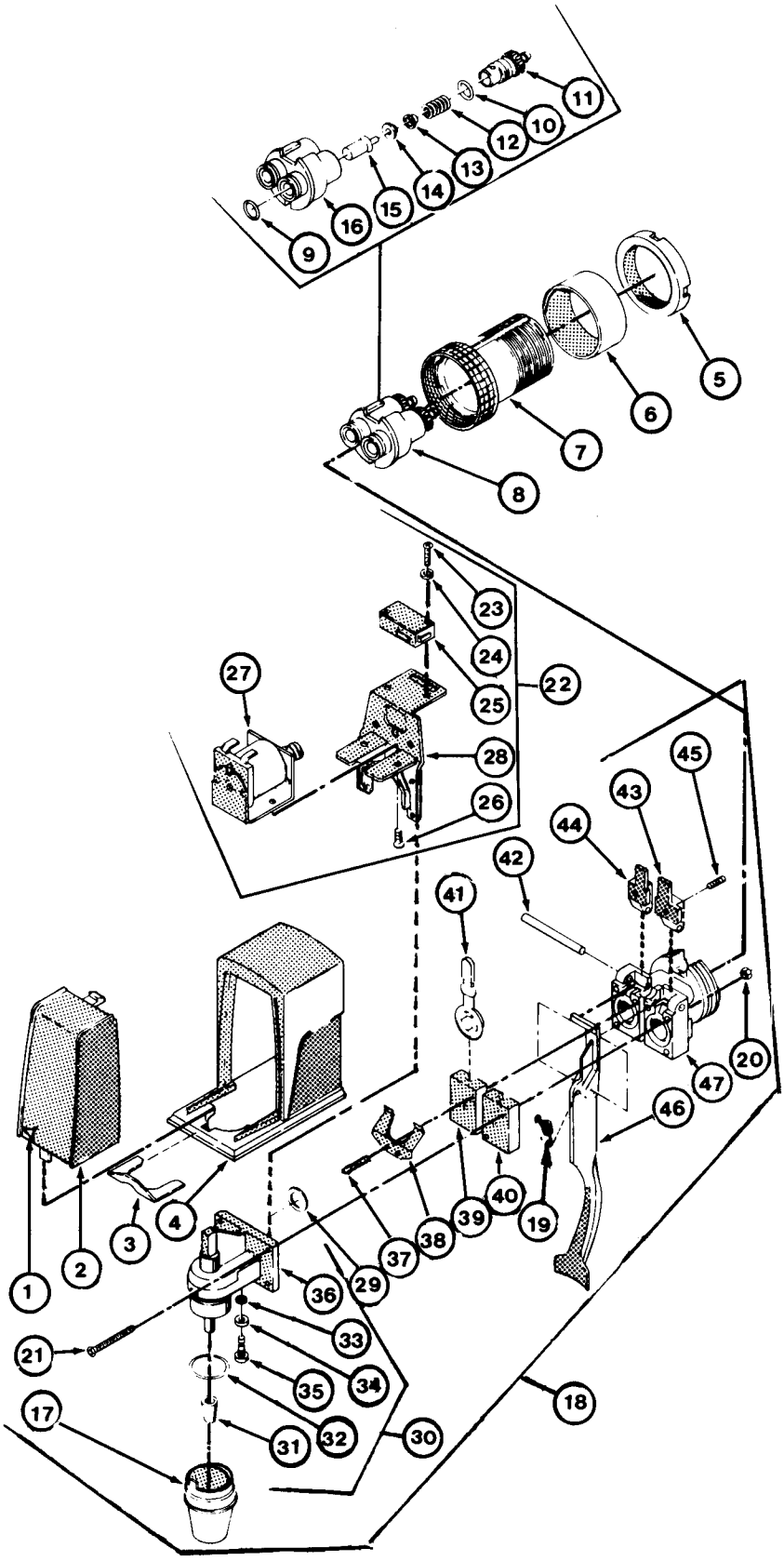
Item No.	Part No.	Description
1	5336	Cover Assembly, (includes 2 thru 5)
2	8731	#10 x ½ Screw, SS Type B Phillips
3	8739	Cover Handle Kit
4	5476	"O" Ring (Cap)
5	5477	Relief Valve
6	5335	Tank Assembly (includes 7 thru 17)
7	8733	"O" Ring (Tank)
8	8478	Syphon Tube
9	8737	Washer, Stainless Steel
10	8736	Gas Tube
11	8734	Valve Poppet Assembly
12	5474	"O" Ring (Valve)
13	8568	Connector Body, Outlet (includes 12)
14	8569	Connector Body, Inlet (includes 12)
15	8732	¼-20 x ⅜ Screw, self locking Stainless
16	8730	Washer, Handle
17	5475	Handle, Tank-Black



Cabinet Details

CABINET DETAIL

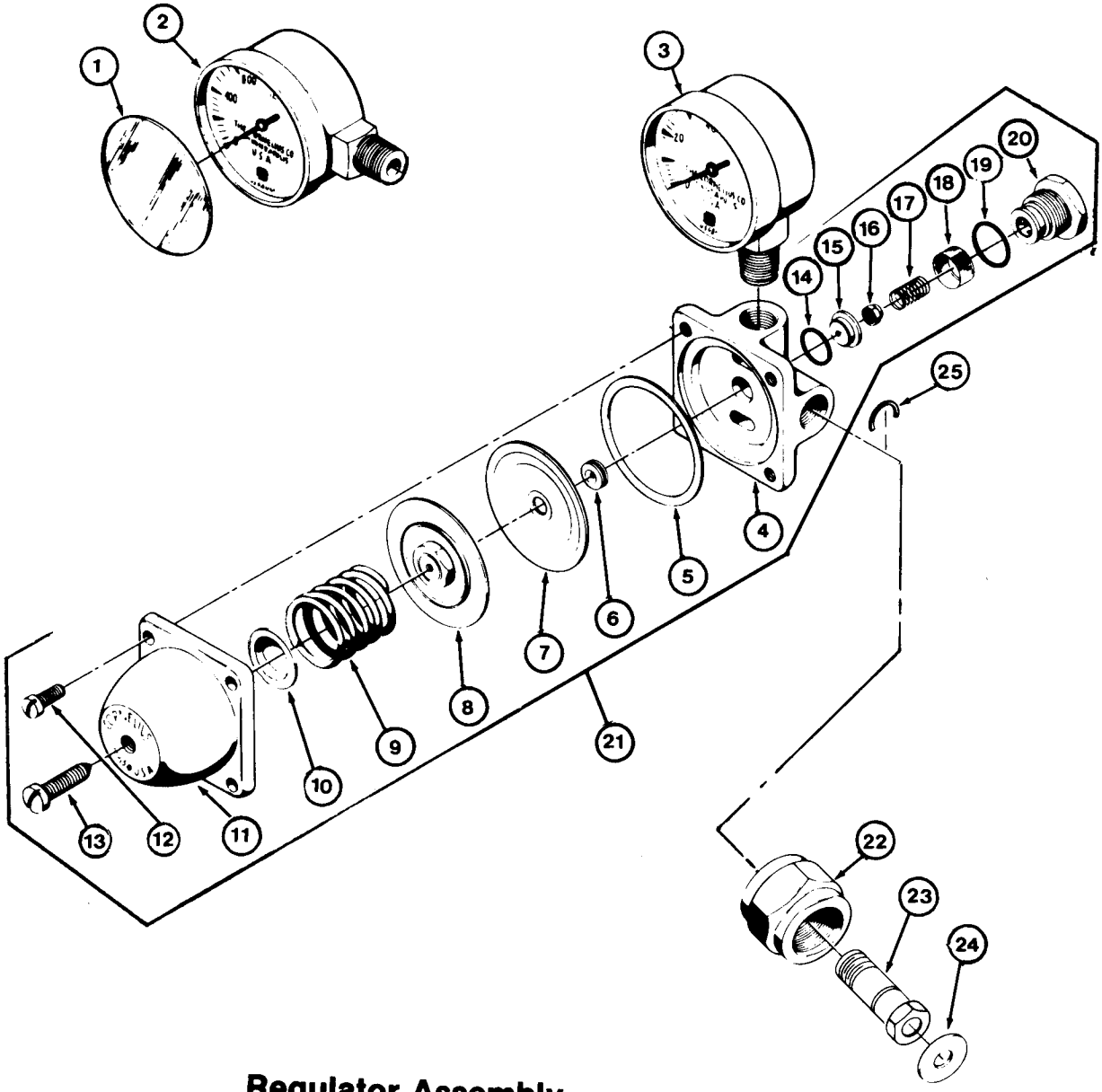
Part Number	Description
11102-01	Cabinet Assembly, Lower
11041-01	Cabinet Assembly, Upper
11153	Door Assembly, Lower Cabinet
11409	Door Assembly, L. H. Upper
11165	Door Assembly, R. H. Upper
11117	Lock Assembly, Upper Door
11116	Lock Assembly, Lower Cabinet
11325	Light Fixture, Complete
11170	Cowling Assembly
4147	Countertop
5181	Cup Dispenser
8553	Slide Assembly
8559	Sliding Tray, Tank
11051	Coin Bank
As Specified	Coin Changer
5083	Lamp, Indicator
990	Switch, Pushbutton



Electric Dispenser Valve Assembly

ELECTRIC DISPENSER VALVE ASSEMBLY

Item No.	Part No.	Description
1	5341	Decal Sheet
2	5991	Cover
3	5876	Cover Frame Locking Clip
4	5913	Cover Frame
5	8468	Shank Nut
6	8467	Valve Spacer, ¾-in. long
7	5977	Sleeve & Coupling Nut Ass'y., 2-½ in. long
8	5478	Poppet Valve Ass'y. (includes 9-16)
9	8729	O-Ring—Poppet Valve
10	8709	O-Ring—Poppet Valve
11	8852	Connector
12	8728	Valve Spring
13	8722	Washer Retainer
14	8727	Washer
15	8850	Poppet Stem
16	8851	Valve Body
17	5852	Nozzle and Collar
18	5448	Valve Head Ass'y (includes 19-47)
19	8833	Valve Lever Return Spring
20	1958	Hex Nut, No. 6-32
21	8858	Screw, Thread Forming Phil Pan Hd, Stainless Steel, No. 6-32 by 1-5/16 in.
22	8870	Switch & Solenoid Ass'y (includes 23-28)
23	8818	Screw, Machine Phil Pan Hd, SS, #4-40 by ⅝ in.
24	8909	Lock Washer, Int Tooth, O. 116 I. D.
25	5460	Switch
26	8980	Screw, Machine Phil Pan Hd, Sems # 10-32 by ¼"
27	5461	Solenoid, 24-volt
28	8812	Solenoid and Switch Bracket
29	8819	O-Ring—Dispenser
30	8839	Mixing Head Ass'y. (includes 31-36)
31	5463	Distributor, Syrup
32	5462	O-Ring—Nozzle
33	8899	O-Ring—Nozzle
34	8853	Bushing—Dispenser
35	8854	Stem—Mixing Head
36	8840	Mixing Head
37	8818	Screw, Machine Phil Pan Hd, SS #4-40 by ⅝"
38	5459	Valve Return Spring
39	8817	Valve Seat
40	8816	Valve Seat
41	5495	Inlet Valve—Dispenser
42	8820	Pivot Pin
43	8855	Actuating Plate (includes item 45)
44	8856	Actuating Plate (includes item 45)
45	8857	Setscrew, Headless Hex Soc, Oval Pt, No. 8-32 by ½"
46	8813	Valve Lever
47	8849	Valve Inlet

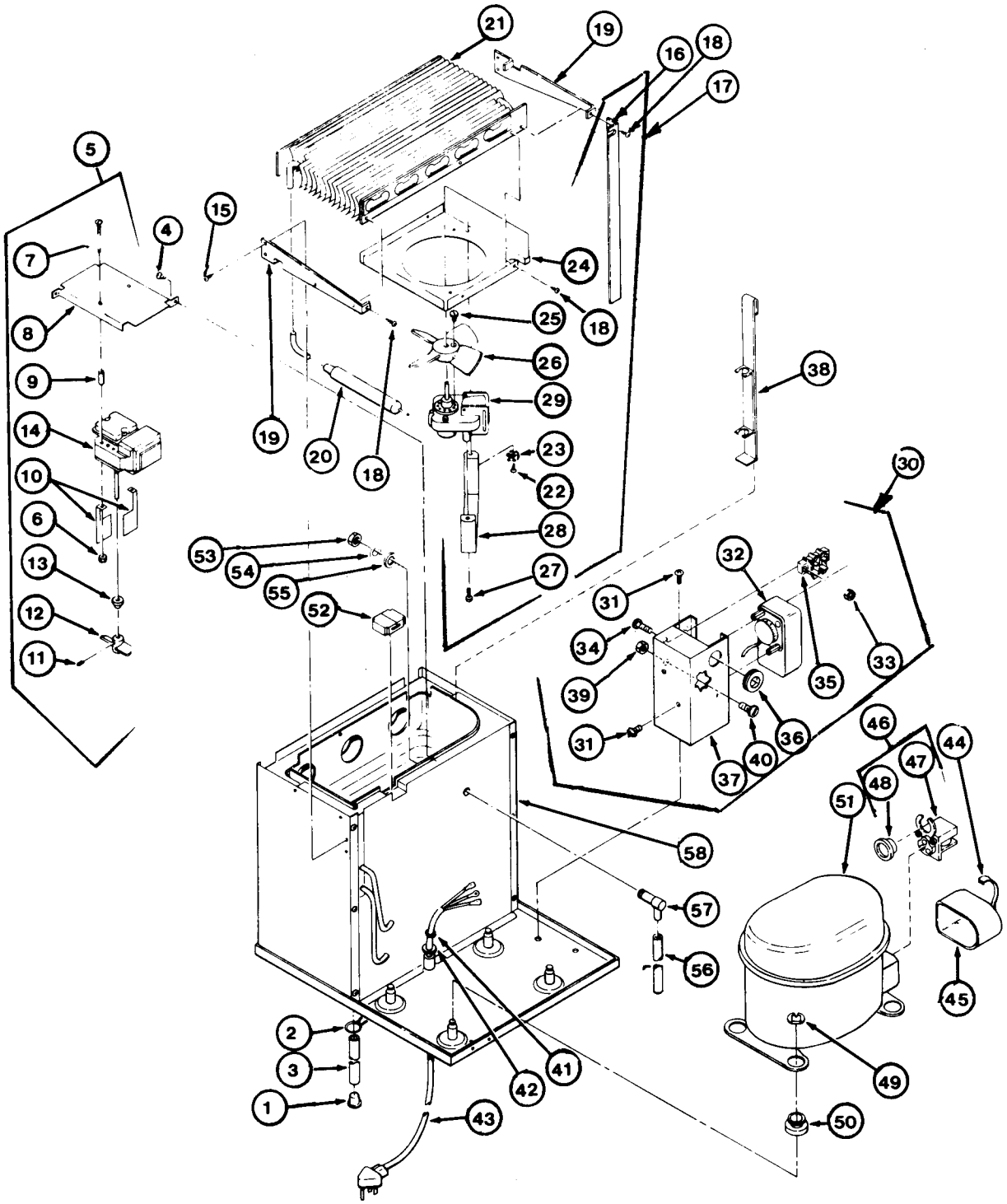


Regulator Assembly

REGULATOR ASSEMBLY

Item	Part Number	Description
1	8700	Lens — Gage
2	5877	Gage - Pressure 2000 psi (includes 1)
3	5878	Gage - Pressure 100 psi (includes 1)
4	8740	Regulator Body
5	8747	Gasket - Baffle
6P	8749	Guide - Red
6S	8704	Guide - Gray
7	8748	Baffle - Regulator
8P	8759	Diaphragm Assembly - gage
8S	8707	Diaphragm Assembly - gage
9P	8703	Spring -- Adjusting - Black 60 psi
9P	8750	Spring - Adjusting - Silver 100 psi
9P	8755	Spring - Adjusting - Bronze 160 psi
10	8751	Spring Retainer - gage
11	8752	Regulator Cover
12	5796	Screw - Adjusting
13	8985	Screw - Machine #10-32 x ½"
14	8742	Gasket - Seat
15P	8741	Seat - Main
15S	8705	Seat - Main
16P	8754	Poppet Assembly
16S	8706	Poppet Assembly
17	8743	Poppet Spring
18	8744	Filter Screen
19	8745	Poppet O-Ring
20	8746	Seat Retainer
21P	8758	Primary CO2 Regulator 100 psi
21P	8756	Primaary CO2 Regulator 160 psi
22	5882	Coupling Nut
23	5883	Coupling Nipple
24	5880	Coupling Washer
25	5881	Retaining Clip - gage

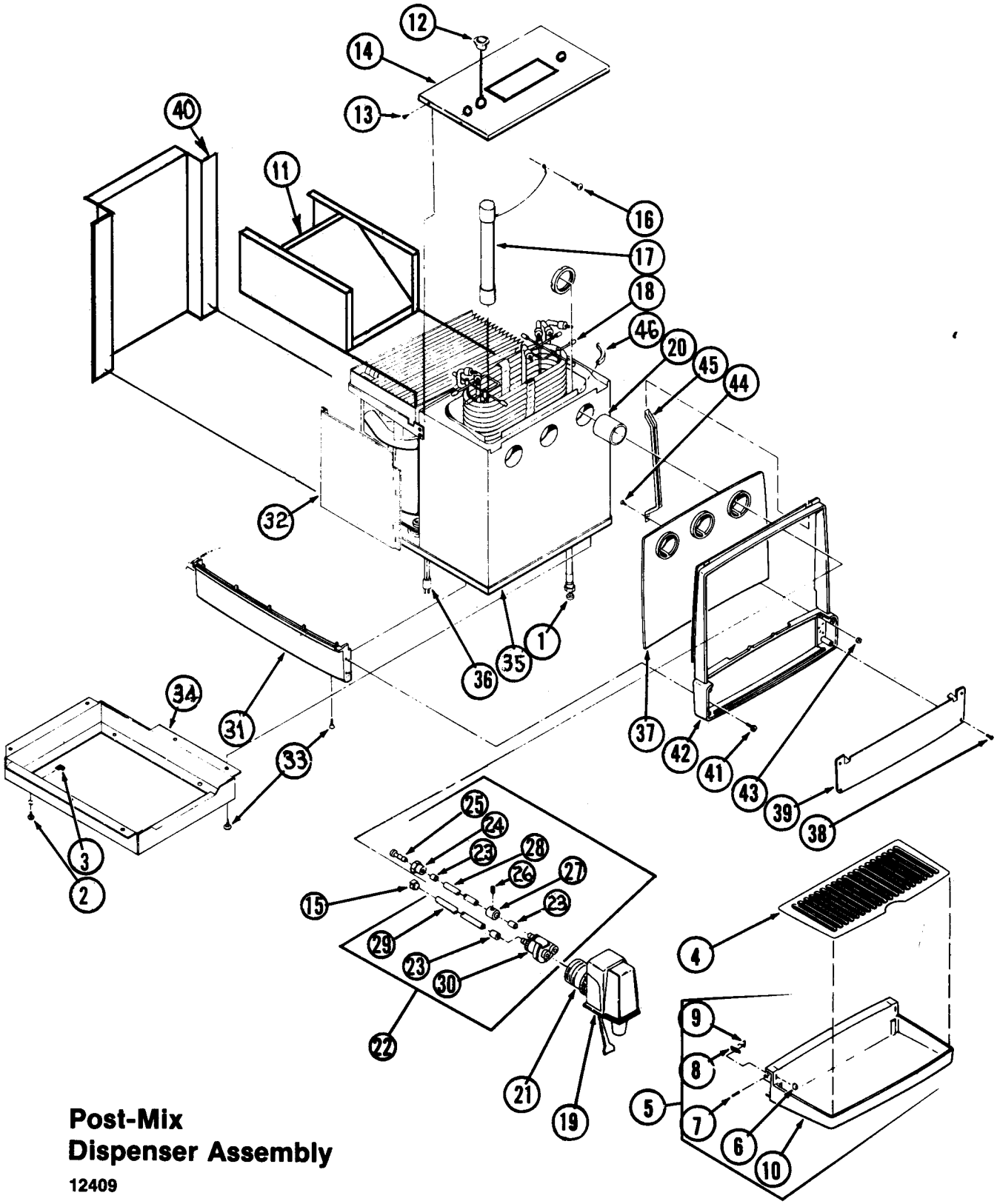
P-Primary S-Secondary



Refrigeration Assembly 8869

REFRIGERATION ASSEMBLY

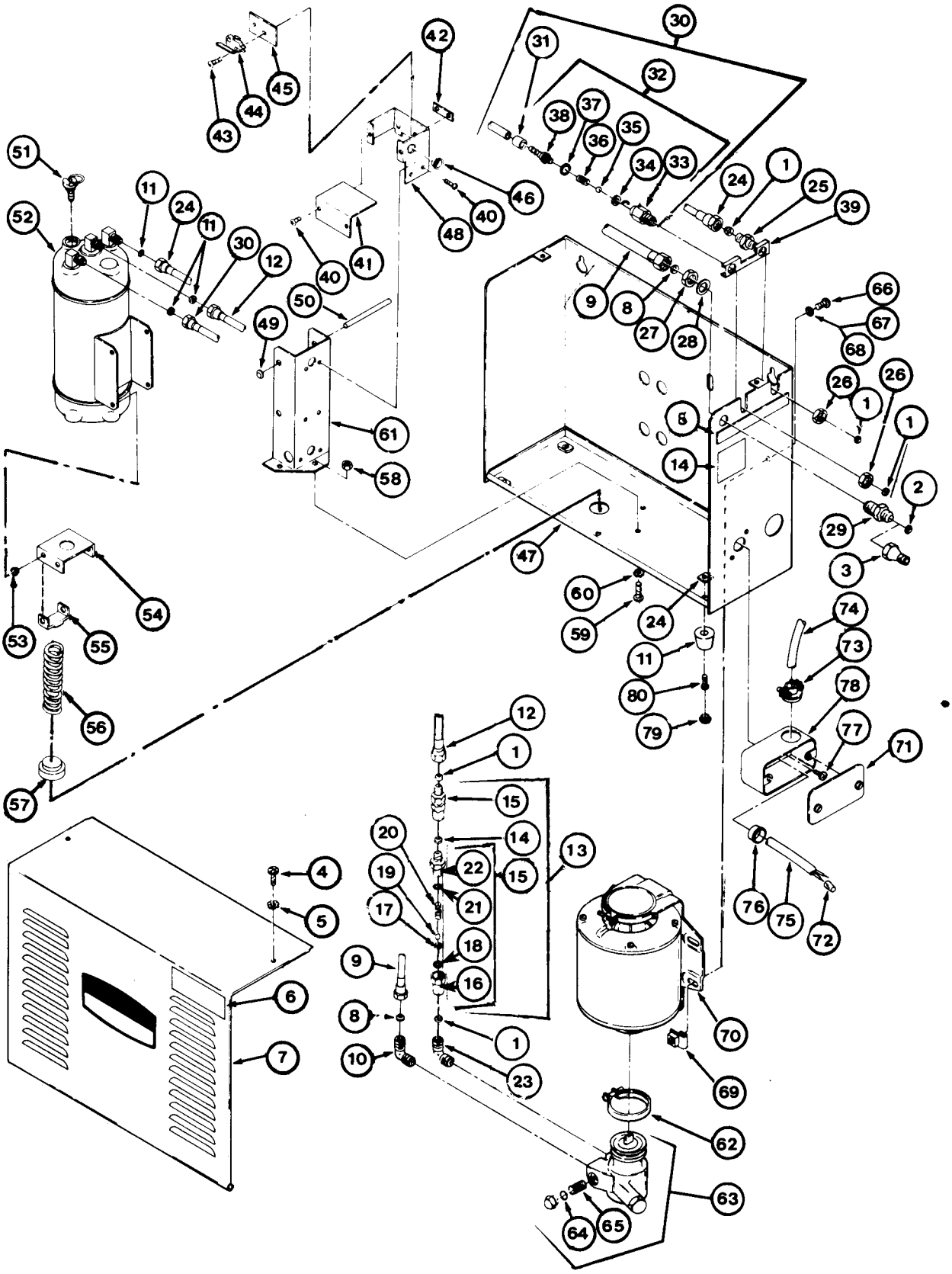
ITEM NO.	PART NO.	DESCRIPTION
	8869	Refrigeration Assembly
1	8473	Plug, Plastic Yellow—Drain
2	8474	Hose Clamp - Drain
3	8708	Drain Hose, 5/16 I. D. x 20"
4	8784	Screw, Sheet Metal Phil Pan Hd, Type A #10 x ½"
5	5851	Agitator Motor Ass'y (includes 5-13)
6	8712	Nut, Self Lock #6-32
7	8779	Screw, Machine Sl Rd Hd, Nickel-Pltd Brass #6-32x1¾
8	8799	Agitator Motor Bracket
9	8772	Spacer - Agitator Motor
10	8773	Anti-Cavitation Baffle
11	8981	Setscrew, Headless Hex Soc Cup Pt #6-32 by ⅛"
12	8770	Propeller
13	8786	Water Slinger
14	8891	Agitator Motor
15	302	Screw, Machine Phil Pan Hd #6-32 by ⅜"
16	8874	Condenser Support
17	8867	Condenser & Fan Ass'y (includes 16-27)
18	8979	Screw Sheet Metal Phil Truss hd Type A #6 by ⅜"
19	8774	Condenser Bracket
20	8762	Strainer-Drier
21	8771	Condenser - Refrigeration
22	8972	Screw, Sheet Metal Phil Truss Hd, Type A #8 x ⅜"
23		Lock Washer, Ext Th, #8
24	8776	Condenser Fan Shroud
25	8767	Screw, Machine Sl Rd Hd #3-48 by 3/16"
26	8788	Condenser Fan Blade
27	8980	Screw, Machine Phil Rd Hd Sems, #10-32 by ¼"
28	8775	Condenser Fan Motor Brkt
29	5493	Condenser Fan Motor
30	8868	Control Box Ass'y (includes 28-37) Refrigeration
31	8977	Screw, Machine Phil Rd Hd, Sems #8-32 by ¼"
32	5455	Ice Bank Control $171.27
33	8901	Hex Nut Keps #6-32
34	8978	Screw, Machine Phil Rd Hd, #6-32 by ⅝"
35	8777	Terminal Block
36	8897	Snap Bushing
37	8861	Control Box
38	8862	Ice Bank Sensor Retainer
39	8901	Nut, Hex Keps No. 6-32
40	8913	Screw, Machine Phil Pan Hd #6-32 by ⅜ in (grnd screw)
41	8763	Strain Relief
42	8879	Washer Flat for ⅝ O. D.
43	8781	Power Cord
44	11610	Bale Strip
45	11611	Terminal Box Cover
46	8873	Overload & Start Relay Ass'y (includes 44 & 45)
47	8903	Start Relay & Overload Protector Retainer
48	8902	Overload Protector
49	8778	Compressor Mtg. Clip
50	8904	Grommet, Rubber
51	8875	Compressor Kit
52	8791	Wiring Bushing, Rubber
53	8780	Nut Hex Jam Stainless Steel 7/16-14
54	8764	Washer, Flat Stainless Steel, for ½ O.D.
55	8710	Washer, Flat Rubber for ½ O.D.
56	8708	Overflow Tube, 5/16 I.D. by 7-in.
57	8769	Overflow Elbow
58	8866	Evaporator Housing



Post-Mix
Dispenser Assembly
12409

POST MIX DISPENSER ASSEMBLY

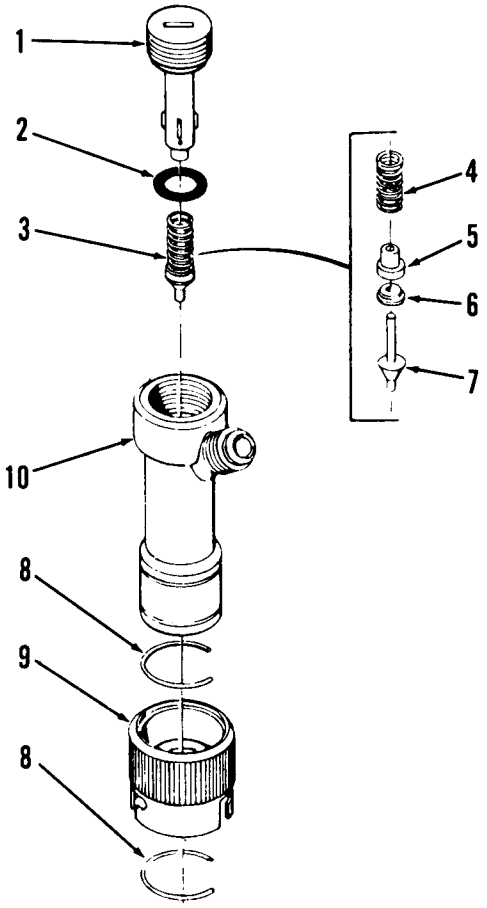
Item No.	Part No.	Description
1	5342	Gasket, Tapered —White
2	8971	Screw, Sheet Mtl. #10-32 x ¾
3	8898	Nut, Speed #10
4	8711	Cup Rest
5	8558	Drip Tray Assy. (incl. 6-10)
6	8821	Nib, Drip Tray
7	8789	Hinge Pin, Drip Tray
8	8792	Latch, Drip Tray
9	8790	Spring, Drip Tray
10	8794	Drip Tray
11	11046	Air Deflector
12	8713	Plug, Water Fill Hole
13	8979	Screw, 6-32 x ⅜ Truss Head
14	8876	Cover, Evaporator
15	8911	Clamp, Tube
16	8784	Screw, Sheet Mtl #10-24 x ½
17	8783	Anode
18	8464	Coils & Tubing Assy.
19	5448	Valve Head Assembly
20	8467	Valve Spacer ¾ lg
21	5977	Sleeve & Coupling Nut Assembly
22	8896	Housing & Tube Assy #2 & 3
23 •	8718	Ferrule, Short
24	8717	Swivel Nut 7/16
25	8720	Nipple - Check Valve
26	8994	Setscrew 5/16-24 x 5/16
27	8802	Flow Restrictor
28	814	Tube
29	8461	Tube
30	5478	Poppet Valve Assembly
31	8795	Panel Side Lower, Refresh Head
32	8878	Panel, Left Hand (Shown)
32	8877	Panel, Right Hand (opposite)
33	1145	Screw, Sheet Mtl. 10-24 x ⅝
34	8863	Base, Refresh Head
35	8869	Refrigeration Assembly
36	8872	Dispensing Valve Wiring
37	8782	Valve Mounting Panel
38	8975	Screw, Thread Cutting
39	8793	Panel, Drip Tray
40	5289	Cover - Rear Refresh
41	8974	Screw, Machine 10-24 x 5/16
42	8599	Trim, Front
43	8901	Nut, Hex 6-32
44	8973	Screw, Machine 6-32 x 5/16
45	8785	Lens Retainer
46	8923	Tubing Protector



Carbonator Assembly 5337

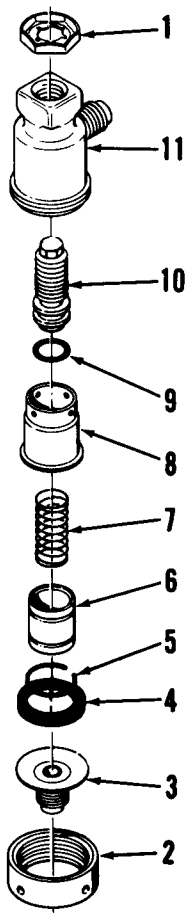
CARBONATOR ASSEMBLY

Item No.	Part No.	Description
	5337	Carbonator Ass'y
1	5342	Gasket, Tapered-White
2	5343	Gasket, Tapered-Black
3	8829	Reducer, Plastic
4	8616	Screw, Machine 10-24 x 5/16"
5	11601	Lockwasher, #10
6	8845	Decal, CO2 Pressure
7	8846	Cover - Carbonator
8	11602	Connector Identification Decal
9	8893	Tube Ass'y. Water Inlet
10	8916	Elbow, ⅜ NPT x ⅝-18
11	8787	Foot, Rubber
12	8477	Tube Ass'y, Pump to tank
13	5486	Dual Check Valve Ass'y (includes 14-22)
14	8890	Decal, Water Supply
15	8824	Check Valve Ass'y, Single (includes 16-22)
16	8837	Housing - Check Valve
17	8835	Washer, Flat
18	5485	Ball Seat - Check Valve
19	8838	Ball - Check Valve
20	8832	Spring - Check Valve
21	8834	O-Ring - Check Valve
22	8836	Retainer - Check Valve
23	8469	Elbow, ⅜ NPT x 7/16-20
24	8848	Speed Nut
25	8766	Connector, Male 7/16-20
26	8765	Hex Nut, Jam 7/16-20
27	8617	Hex Nut ⅝-18
28	11603	Lockwasher, ⅝"
29	8472	Connector, Male ⅝-18
30	5974	Check Valve & Tube Ass'y CO2 Inlet
31	8716	Ferrule
32	8842	Check Valve Ass'y (includes 33-38)
33	11604	Housing - Check Valve CO2
34	8822	Washer, Flat, For ⅛ O.D.
35	8823	Ball - Check Valve
36	8970	Screw, Machine ¼-20 x ½"
37	8729	O-Ring - Check Valve
38	8720	Nipple - Check Valve
39	8894	Fitting Bracket
40	8968	Screw, Thread Rolling 6-32 by ⅜"
41	11605	Switch Box Cover
42	8915	Twin Nut (for 4-40 thd)
43	8818	Screw, Machine #4-40 by ⅝"
44	5487	Level Control Switch Carbonator
45	8900	Insulation - Switch
46	8907	Snap Bushing
47	8847	Housing - Carbonator
48	8843	Switch Box
49	8825	Reusable Clip
50	8830	Pivot Rod
51	8841	Relief Valve (relief-200 psig)
52	5975	Carbonator Tank
53	8826	Bearing, Nylon
54	8827	Link Arm, Upper & Lower
55	8828	Spring Pivot
56	8470	Spring
57	8471	Spacer
58	11606	Nut, Hex, Keps ¼-20
59	318	Screw, Machine ¼-20 by ⅝"
60	8908	Lockwasher, ¼"
61	11608	Pivot Housing
62	8768	Coupling, Water Pump & Motor
63	5484	Pump, Water 100 gph
64	8865	O-Ring
65	8864	Screen - Carbonator
66	8965	Screw, Machine ¼-20 x ½"
67	3036	Washer, Flat ¼"
68	8908	Lockwasher, SS ¼"
69	8831	Speed Nut, J-Type (for ¼-20 thd)
70	8466	Motor, Pump
71	8844	Junction Box Cover
72	8881	Splice Cap
73	8797	Strain Relief
74	8882	Cord, Service
75	8880	Cord, Power
76	8798	Bushing - Carbonator
77	8969	Screw, Thread Rolling 8-32 by ⅜"
78	8914	Junction Box
79	8905	Plug, Plastic



QUICK DISCONNECT ASSEMBLY

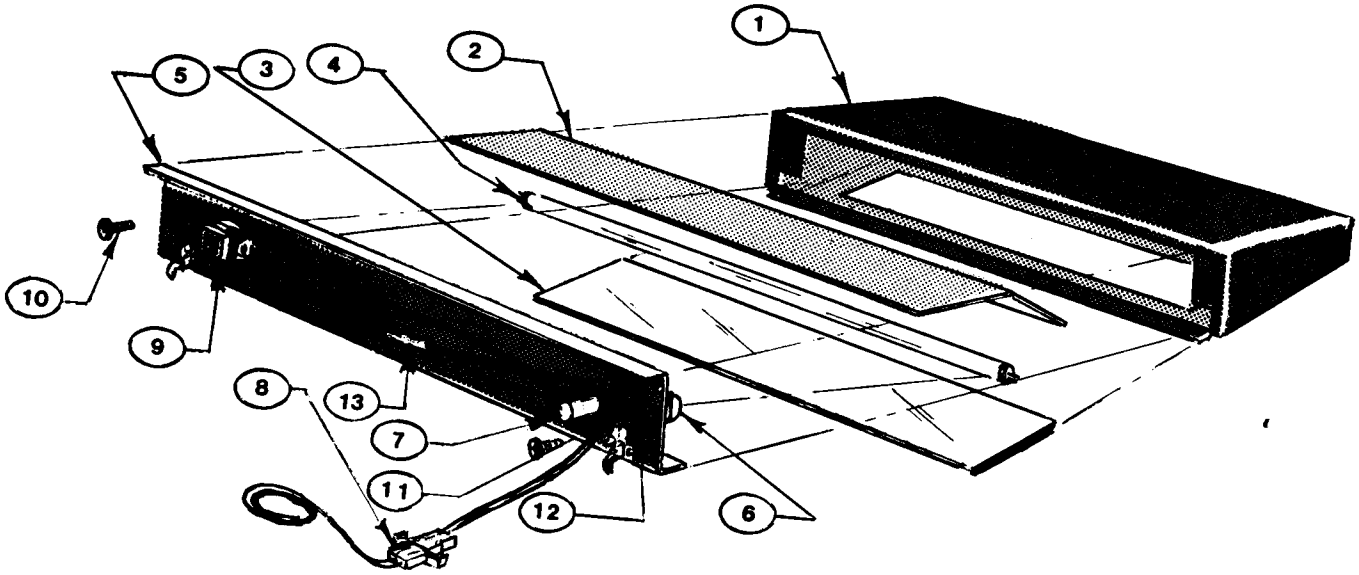
Item No.	Part No.	Description
	5479	Quick Disconnect Assembly, Two-slot (gas)
	5480	Quick Disconnect Assembly, Three-slot (liquid)
1	8724	End Plug, Grey (gas)
	8723	End Plug, Black (liquid)
2	5884	End Plug, Seal Washer
3	5469	Valve Poppet Assembly (includes 4-7)
4	8721	Valve Spring
5	8722	Washer Retainer
6	5465	Poppet Washer
7	5470	Main Stem
8	8725	Lock Ring
9	5885	Lock Collar, Two-slot (gas)
	5886	Lock Collar, Three-slot (liquid)
10	8726	Body



CAUTION
ITEMS 6 AND 8 ARE A MATCHED PAIR.

FLOW REGULATOR ASSEMBLY

Item No.	Part No.	Description
	5481	Syrup Flow Regulator Assembly, White (syrup)
	5447	Water Flow Regulator Assembly, Black (water)
1	8804	Nut - Lock
2	8810	Nut - Coupling
3	8807	Inlet Fitting
4	5482	Washer - Seal
5	5483	Expansion Ring
6	8805	Piston (Syrup Flow Regulator)
	8814	Piston (Water Flow Regulator)
7	8806	Spring
8	8815	Sleeve
9	5464	O-Ring
10	8811	Screw, Adjusting
11	8808	Regulator Body, White (Syrup Flow Regulator)
	8809	Regulator Body, Black (Water Flow Regulator)



LAMP ASSEMBLY

Figure No.	Part No.	Description
1	11320-01	Light Fixture
2	5167	Light Deflector
3	5822	Light Diffuser
4	5373	Lamp F15T12CW 15 WAtt
5	11324	Lamp Bracket Assembly
6	801	Lampholder AMP 1-480344-0
7	2607	Starter FS-25
8	4844	Plug — Molex 1545P
9	104	Ballast GE89G457G5
10	1868	Screw #8 ¼ Type B
11	1466	Starter Socket Kulka 596
12	5378	Cable Clamp Richco E4 (¼)

POLYVEND MODEL CSV—3
COLD DRINK MODULE
ALPHABETICAL PARTS LIST

Part Number	Description
8855	Actuating Plate - Dispenser
8856	Actuating Plate - Dispenser
5875	Adapter, Male Brass ¼ NPTF by 7/16-20
8891	Agitator Motor
5851	Agitator Motor Assembly
8799	Agitator Motor Bracket
11046	Air Deflector Assembly
8773	Anti-Cavitation Baffle
8783	Anode - Dispenser
8748	Baffle - Regulator
8838	Ball
8823	Ball, CO2 Check Valve
5485	Ball Seat
104	Ballast GE #896 457 G5
11610	Bale Strap
8863	Base - Refresh Head
8826	Bearing, Nylon
8726	Body
8885	Body
8860	Bracket
8798	Bushing - Carbonator
8853	Bushing - Dispenser
11102	Cabinet Assembly - Lower
11041	Cabinet Assembly - Upper
5378	Cable Clamp, Richco #E-4 (¼")
2369	Cable Clamp, Richco #NE-8
8501	Cam - Lower Door
5265	Cam - Upper Door
8697	Cam - Upper Door
5266	Cam - Lower Door
5337	Carbonator ¼ H.P. SS
11081	Carbonator Kit
5975	Carbonator Tank
8842	Check Valve Assembly CO2
5974	Check Valve and Tube Assembly, CO2 Inlet
8888	CO2 Check Valve Assembly
5347	CO2 Manifold Assembly (Complete)
8760	CO2 Regulator & Gages Assembly
8801	CO2 Regulator, Low Calorie Syrup
5346	CO2 Regulator Assembly
8464	Coil Assembly and Tubing

Polyvend Inc.
CONWAY, ARKANSAS

Part Number	Description
11051	Coin Bank
11049	Coin Hopper
11017	Coin Insert Trim Plate Assembly
8921	Coin Return Door
As specified	Coin Changer
8875	Compressor Kit
8778	Compressor Mounting Clip
8771	Condenser, Refrigeration
8774	Condenser Bracket
8867	Condenser & Fan Assembly
8788	Condenser Fan Blade
5493	Condenser Fan Motor
8775	Condenser Fan Motor Bracket
8776	Condenser Fan Shroud
8874	Condenser Support
8852	Connector
8569	Connector, Body-Inlet (gas 2-pin)
8568	Connector, Body-Outlet (liq. 3-pin)
8871	Connector Housing, 3-pin
8889	Connector Housing, 4-pin & wiring
8766	Connector, Male SS 7/16-20
8472	Connector, Male Brass ⅝-18
8861	Control Box - Refrigeration
8868	Control Box Assembly - Refrigeration
8882	Cord - Service
1447	Counter, ENM #E 2 B64C, 24 volt
4147	Countertop, Refresh
8810	Coupling Nut
5882	Coupling Nut
5883	Coupling Nipple
5880	Coupling Washer
8768	Coupling, Water Pump & Motor
8752	Cover - Regulator
11611	Cover, Terminal Box
5991	Cover, Dispensing Valve
8846	Cover, Carbonator
5336	Cover Assembly, Red - Syrup Tank
5913	Cover, Frame
5876	Cover, Frame Locking Clip
8739	Cover Handle Kit
11605	Cover - Switch Box
11170	Cowling Assembly
8719	Cross, Male 7/16"
5181	Cup Dispenser
11048	Cup Dispenser Bracket
8711	Cup Rest
8697	Cycle Cam & Set Screw

Part Number	Description
8614	Cycle or Product Switch
8845	Decal CO2 Pressure
11602	Decal Connector Identification
5362	Deca "Free Play"
5341	Decal Sheet
8890	Decal Water Supply
8759	Diaphragm Assembly
8707	Diaphragm Assembly
5351	Dispenser Mtg. Gasket 42" long
8872	Dispensing Valve Wiring Harness
5467	Dispensing Valve Relay, 24 VAC
5463	Distributor, Syrup
11153	Door Assembly, Lower Cabinet
11409	Door Assembly, L. H. Upper
11165	Door Assembly, R. H. Upper
11162-02	Door Hinge - Lower
11162-01	Door Hinge - Upper
8708	Drain Hose 5/16 ID x 20"
8794	Drip Tray
8558	Drip Tray Assembly
5486	Dual Check Valve Assembly
8887	Duck Bill, Check Valve
8916	Elbow ⅜ NPT by ⅝-18
8469	Elbow ⅜ NPT by 7/16-20
2372	Elbow Catch, National Lock #61-3348-NP-1
8723	End Plug Blk. (liquid)
8724	End Plug Grey (gas)
5884	End Plug Seal Washer
8876	Evaporator Cover Assembly
8866	Evaporator Housing
5483	Expansion Ring
8716	Ferrule, Carbonator
8718	Ferrule, Short
5799	Fiberglass screen - small
5259	Filter Mounting Bracket
8744	Filter Screen
8894	Fitting Bracket
5292	Flat Escutcheon #2061-10
5481	Flow Regulator Assembly, Syrup
5447	Flow Regulator Assembly, Water
8803	Flow Regulator Bracket
8802	Flow Restrictor
8787	Foot, Rubber
8918	Frame, Coin Return Door
5879	Gage, Pressure 160 psi
5877	Gage, Pressure 2000 psi
5878	Gage, Pressure 100 psi
8702	Gage, Pressure 60 psi

Part Number	Description
5342	Gasket 7/16"
8747	Gasket, Baffle
5343	Gasket - Blk.
8736	Gas Tube
8904	Grommet, Rubber
5365	Ground Wire
8704	Guide, Grey
8749	Guide, Red
5475	Handle - Tank - Black
8789	Hinge Pin, Drip Tray
8474	Hose Clamp, Drain
8847	Housing - Carbonator
8837	Housing - Check Valve
8886	Housing
8886	Housing
5976	Housing & Tube Ass'y. #1 Disp. Valve
8896	Housing & Tube Ass'y. #2 & #3 Disp. Valve
5455	Ice Bank Control
8862	Ice Bank Sensor Retainer
8807	Inlet Fitting
5495	Inlet Valve - Dispenser
8900	Insulation - Switch
8914	Junction Box - Carbonator
8844	Junction Box Cover - Carbonator
11138	Junction Box Assembly
5341	Kit Lens Decal
11324	Lamp Bracket Assembly Complete
8582	Lamp Fixture Wiring Harness
5373	Lamp, GE F15T12 CW, 15 watt
5823-01	Lamp Bracket Retainer L. H.
5823-02	Lamp Braket Retainer R. H.
11322	Lamp Bracket Weld Assembly
5083	Lamp, Indicator
801	Lampholder, amp #1-480344-0
8792	Latch, Drip Tray
2601	Leg Glide, National Lock #62-004A
8700	Lens, Gage
8785	Lens, Retainer
5487	Level Control Switch, Carbonator
	Light Fixture Complete
8827	Link Arm Upper & Lower
8919	Liner, Coin Return Cup
11116	Lock Assembly - Lower Cabinet
11117	Lock Assembly - Upper Door
5269	Lock - Double Bitted
8492	Lock, 7/16 Barrel
5885	Lock Collar - Two-slot (gas)
5886	Lock Collar - Three-slot (liq.)

Part Number	Description
8804	Lock Nut
8725	Lock Ring
11601	Lockwasher Ext Tooth #10
8908	Lockwasher Ext. Tooth XX ¼"
8909	Lockwasher Int. Tooth 0.116 I.D.
11603	Lockwasher, ⅝ dia. Internal Tooth
266	Lockwasher #8 Internal Tooth
11609	Lockwasher #8 External Tooth
11153	Lower Cabinet Door Assembly Complete (coffee-refresh)
11102	Lower Cabinet Assembly
4615	Lower Trim
4623	Lower Trim Insert
5386	Magnetic Catch, Southco #02-10-201-10
8741	Main Seat - Gage
8705	Main Seat - Gage
5470	Main Stem
8859	Manifold
8753	Manifold Nipple Hex ¼ NPT
8840	Mixing Head, Dispenser
8839	Mixing Head Assembly, Dispenser
5297	Molex #1396 Receptacle, CMI
8466	Motor - Pump
8883	Mounting Bracket
8821	Nib - Drip Tray
8720	Nipple - Check Valve
5852	Nozzle & Collar
1788	Nut - Hex
11520	Nut - Hex
3030	Nut - Hex #10-32
1958	Nut - Hex #8-32
8780	Nut - Hex Jam SS 7/16-14
8765	Nut - Hex Jam 7/16-20
8901	Nut - Hex Keps #6-32
11606	Nut - Hex Keps #¼-20
8617	Nut - Hex - Nickel pltd. Brass ⅝-18
8915	Nut - Twin for 4-40 thd.
2358	Nylet Bushing, Heyco #B-500-375
5476	O-Ring (cap)
8733	O-Ring (tank)
5474	O-Ring (valve)
8834	O-Ring Check Valve
8729	O-Ring, Poppet Valve
8865	O-Ring, Carbonator
8709	O-Ring, Poppet Valve
8819	O-Ring, Dispenser
5462	O-Ring, Nozzle
8899	O-Ring, Nozzle
8745	O-Ring, Poppet

Part Number	Description
5067	Outer Door Panel
8769	Overflow Elbow, Refrigeration
8708	Overflow Tube 5/16 I.D. by 7"
11083	Overlay Plate Assembly Complete
11194	Overlay Plate Assembly Screened
8902	Overload Protector - Refrigeration
8873	Overload & Start Relay Assembly
8912	Pal Nut Tubular
8878	Panel, Left Hand
8793	Panel, Drip Tray
8877	Panel, Right Hand
8795	Panel, Side Lower
5375	Parallel Blade Plug #GE 4300-2
4844	2 Pin Molex Plug w/pins #1545P
8701	Pipe Plug ¼ NPT F 130066
8805	Piston (Syrup Flow Reg.)
8814	Piston (Water Flow Reg.)
11608	Pivot Housing
8820	Pivot Pin - Dispenser
8830	Pivot Rod - Carbonator
5364	Plain Washer #10
5340	Plug Cap
8713	Plug - Water Fill Hole
8905	Plug Plastic
8473	Plug Plastic Yellow - Drain
5322	Plunger, Coin Return
8706	Poppet Assembly
8754	Poppet Assembly
8743	Poppet Spring
5478	Poppet Valve Assembly
8850	Poppet Stem
5465	Poppet Washer
729	"Pop" Rivet USM #SD-42-BS
11156	Post Mix Disp. Assembly Complete
11079	Post Mix Dispenser Assembly
8880	Power Cord - Carbonator
8781	Power Cord
1653	Pressure-Sensitive Bumper 3M #SU5112
5391-1	Price Decal, 10-cent
5391-2	Price Decal, 15-cent
5391-3	Price Decal, 20-cent
8758	Primary CO2 Regulator 100 psi
8756	Primary CO2 Regulator 160 psi
8760	Primary CO2 Regulator Assembly
5457	Primary Regulator Repair Kit
5466	Product Cam & Set Screw
8770	Propeller
5484	Pump, Water 100 gph

Part Number	Description
5479	Quick Disconnect Assembly (gas)
5480	Quick Disconnect Assembly (liquid)
5289	Rear Cover - Refresh
5064	Rear Screen - small
8829	Reducer, Plastic 7/16-20 Male by 5/8-18 female
11174	Refresh Module Assembly Complete
8869	Refrigeratio Assembly
8740	Regulator Body
8808	Regulator Body White (Syrup Flow Regulator)
8809	Regulator Body Blk. (Water Flow Reg)
8761	Regulator Mounting Bracket
5350	Relay Mounting Bracket Assembly 24 VAC
5477	Relief Valve - Syrup Tank
8841	Relief Valve (Relief Pressure 200 psig)
8836	Retainer, Check Valve
5881	Retaining Clip - Gage
8920	Retaining Pin, Coin Return Door
8825	Reusuable Clip - Carbonator
5388	Sash Chain #35 x 25" long
8864	Screen - Carbonator
1868	Screw #8 x ¼ Type "B"
1298	Screw #8 x ⅜Type "AB"
2574	Screw # x 1" Type "A"
5402	Screw #8-32 x 3 ½ Ph Pan Hd w/1/8 dog pt ZP
2614	Screw #8 x ½" type "A"
1299	Screw #8 x ⅝ Ph. Pan Hd. type "B"
8811	Screw - Adjusting
5796	Screw - Adjusting #¼-20 by 1"
5367	Screw, Machine (Ground) #8-32 x ½"
5372	Screw, Machine #10-24 x ⅜"
5424	Screw, Machine #6-32 x ½"
302	Screw, Machine #6-32 x ⅜"
8616	Screw, Machine, Sl Pan Hd Nickel pltd steel #10-24 x 5/16
1145	Screw, Sheet Mtl #10-24 x ⅝
8818	Screw, Machine, phil Pan Hd SS #4-40 x ⅝"
8779	Screw, Machine Sl Rd Hd Nickel-pltd Brass # 6-32 x 1 ¾"
8767	Screw, Machine Sl Rd Hd #3-48 x 3/16"
8913	Screw, Machine Phil Pan Hd. #6-32 x ⅜" (Ground)
8922	Screw, Machine Sl Rd Hd #4-40 x ⅛
8698	Screw, Machine Sl F.L. Hd Nylon ¼-20 x ⅜
8985	Screw, Machine Phil Fil Hd. #10-32 by ½"
8980	Screw, Machine Phil Pan Hd SEMS #10-32 by ¼"
8978	Screw, Machine Phil Pan Hd #6-32 by ⅝"
8977	Screw, Machine Phil Phil Rd Hd SEMS #8-32 by ¼"
8974	Screw, Machine Fil Hd #10-24 by 5/16"
11607	Screw, Machine Sl Rd Hd ¼-20 - ⅝

Part Number	Description
8973	Screw, Machine Phil Fl Hd #6-32 by 5/16"
8964	Screw, Machine Phil Pan Hd SS #4-40 by 5/8"
8965	Screw, Machine Sl Pan Hd 1/4-20 by 1/2"
8970	Screw, Machine Sl Rd Hd 1/4-20 by 1/2"
8966	Screw, Machine SC Bind Hd #6-32 by 1/2"
318	Screw, Machine 1/4-20 x 5/8
8732	Screw, Self-Locking Phil Truss Hd SS 1/4-20 x 3/8"
8784	Screw, Sheet Metal Phil Pan Hd Type A Alum #10 by 1/2"
8967	Screw, Sheet Metal Pa. Truss Hd #8 x 3/8
8971	Screw, Sheet Metal Sl Rd Hd Type A #10 by 3/4"
8972	Screw, Sheet Metal Phil Truss Hd Type A #8 by 3/8"
8979	Screw, Sheet Metal Phil Truss Hd Type A #6 by 3/8"
8858	Screw, Thread Forming Phil Pan Hd SS #6-32 byl 5/16
8975	Screw, Thread Rolling Phil Fil Hd 6-32 x 5/16
5293	Screw - Washer Head
11521	Screw - SEMS
8968	Screw, Thread Rolling Phil Pan Hd #6-32 x 3/8"
8969	Screw, Thread Rolling Phil Pan Hd #8-32 x 3/8"
8731	Screw, Sheet Metal Phil Bind Hd SS Type B #10 x 1/2"
5482	Seal - Washer
8742	Seal - Gasket
8746	Seat - Retainer
8801	Secondary CO2 Regulator Assembly
8757	Secondary CO2 Regulator 60 psi
5458	Secondary Regulator Repair Kit
8712	Self-Locking Nut #6-32
8981	Set Screw, Headless Hex Soc. Cup Pt. #6-32 by 1/8"
8857	Set Screw, Headless Hex Soc. Oval Pt. #8-32 x 1/2"
8699	Set Screw Headless Hex Soc. Plain Pt. Nylon 1/4-20x1/2"
8994	Set Screw Headless Hex Soc. 1/2 dog pt 5/16 x 5/16"
8468	Shank Nut - Dispenser
11410	Shelf Assembly - Refresh & Utility
8824	Single Check Valve Assembly
11140	Slanted Panel Sub Assembly
5977	Sleeve & Coupling Nut Assembly 2 1/2" long
8815	Sleeve
8553	Slide Assembly (Accuride #C-301-1384 C)
8559	Sliding Tray - Syrup Tanks
5803	Snap Bushing, Heyco #SP-625-7
1961	Snap Bushing Heyco #SB-1500-21
8907	Snap Bushing - Carbonator
8897	Snap Bushing - Refrigeration
8906	Snap Busing
8910	Socket Coin Mechanism
8884	Socket Relay
5461	Solenoid 24 V
8812	Solenoid & Switch Bracket

Part Number	Description
8772	Spacer - Agitator Motor
8471	Spacer - Carbonator
8917	Spacer
5344	Spanner Wrench
8898	Speed Nut J-Type (for #10 screw)
8848	Speed Nut for ¼-20 thd
8831	Speed Nut J Type (for ¼-20 thd)
8881	Splice Cap - Carbonator
5351	Sponge Rubber ⅛ x ½
8703	Spring, Adjusting Blk. 60 psi
8755	Spring, Adjusting Bronze 160 psi
8750	Spring, Adjusting, Silber 100 psi
8790	Spring, Drip Tray
8470	Spring, Carbonator
8832	Spring, Check Valve
8806	Spring
8751	Spring Retainer, Gage
8828	Spring Pivot
8903	Start Relay & Overload Protector Retainer
1466	Starter Socket, Kulka #596
8854	Stem, Mixing Head
5802	Strain Relief Heyco #SR-7P-2
8763	Strain Relief
8762	Strainer - Drier
8797	Strain Relief
11173	Sub-Plate Assembly—Complete Left Side
2607	Starter, FS-25
5460	Switch
8695	Switch Bracket
8843	Switch Box - Carbonator
8696	Switch Spring
990	Switch - Pushbutton
8870	Switch & Solenoid Assembly
8717	Swivel Nut 7/16-20
8478	Syphon Tube (3 ga. syrup tank)
5481	Syrup Flow Regulator Assembly White
5336	Syrup Tank Cover
5335	Syrup Tanks 3 gal.
11136	Syrup Tank Kit
5335	Tank Assembly
8777	Terminal Block, Refrigeration
11154	Timer Assembly - Complete - Mechanical
8694	Timer Bracket
12381	Timer - Solid State Electronic
8892	Timer Electric Lead to Disp. Valves Wiring Harness
5468	Timer Motor
992	Toggle Switch, C.H. #7580-K8
12369	Transformer

Part Number	Description
8599	Trim Front & Back
5758	Tube Assembly CO2 Regulator to Manifold & to Carbonator
8479	Tube Assembly CO2 Manifold to Syrup Tank
8480	Tube Assembly Syrup to Flow Reg.
11358	Tube Assembly Carbonated Water to Flow Regulator
8893	Tube Assembly Water Inlet
8477	Tube Assembly Pump to Tank
11359	Tube Assembly Inlet to coil 4' long
8895	Tube Assembly Carbonated Water to Cross
8714	Tube, Carbonated Water, Cross to Disp valve .108 ID by 7"
8911	Tube Clamp
8461	Tube Syrup Coil to Disp. Valve .156 I.D. by 3¼"
8461	Tube Syrup Coil to Disp. Valve .156 I.D. by 4"
8923	Tubing Protector
8512	Upper Cabinet Screen
11041	Upper Cabinet Assembly
11409	Upper Door Assembly L.H.
11165	Upper Door Assembly R.H.
5280	Upper Door Hinge Bushing
8851	Valve Body
5448	Valve Head Assembly
8849	Valve Inlet
8813	Valve Lever
8833	Valve Lever Return Spring
8782	Valve Mtg. Panel
8734	Valve Poppet Assembly (syrup tank)
5469	Valve Poppet Assembly
5459	Valve Return Spring
8816	Valve Seat
8817	Valve Seat
8467	Valve Spacer ¾" long - Dispenser
8728	Valve Spring
8721	Valve Spring
8835	Washer, Flat SS
3036	Washer, Flat ¼"
8822	Washer, Flat, Rubber for ⅛ O.D.
8879	Washer, Flat for ⅝ O.D.
8764	Washer, Flat SS for ½ O.D.
8710	Washer, Flat Rubber for ½O.D.
8504	Washer
8727	Washer SS
8730	Washer - Handle
8722	Washer - Retainer
5682	Water Filter, Everpure #QC 7-C-MC
11160	Water Filter Kit - Cold (Optional)

Part Number	Description
5447	Water Flow Regulator Assembly Blk.
8786	Water Slinger
2369	Wire Cable Clamp
2421	3 Wire Grounded Outlet
8791	Wiring Bushing, Rubber