

**INSTRUCTIONS FOR INSTALLING A WATER BATH WATER COOLING COIL
ASSEMBLY REPLACEMENT KIT IN A NATIONAL VENDORS[®] MODULINE, SERIES CDM, OR A
CROWN SEVENTY TWO[®], SERIES CDM-72, OR A CROWN SEVENTY TWO[®], SERIES, OR
GOLDEN FURNITURE LINE CDM-72A COLD DRINK MERCHANDISER**

These instructions cover procedures for installing a Water Bath Water Cooling Coil Assembly Replacement Kit in a Moduline, Series CDM, or a Crown Seventy Two, Series CDM-72, or a Crown Seventy Two, Series, or Golden Furniture Line CDM-72A Cold Drink Merchandiser.

Read these instructions carefully and thoroughly before installing the Kit. Retain these instructions for part number and installation information.

All references to Left or Right in these instructions are, unless otherwise specified, as seen by the serviceman as he views the Merchandiser, the Assembly, or Part described from the front of the Merchandiser. When removing a part, it is suggested that the attaching hardware be placed in individually labeled containers to assure proper identification when installing the part.

Water Bath Water Cooling Coil Assembly Replacement Kit, Part Number 311-8079, contains the following parts:

Part Number	Description	Quantity
311-8068	Water Bath Water Cooling Coil Assembly	1
310-7049	Tea Valve to Water Valve Tube Assembly	1
310-8147	Carb. to 3 Way Valve Tube Assembly	1
310-8148	Non Carb. Valve Tube Assembly	1
310-8236	Tea to Vent Valve Tube Assembly	1
311-8108	Tube Assembly	1
311-8109	Female Connector	1
311-8070	3/8" x 1/8" Bushing	1
114-1058	1.141" x .406" x .028" Belleville Washer	1
310-4124	No. 8-32 x 5/8" PHS Stainless Steel Screw	2
311-8078	Installation Instructions * * *	1

TO INSTALL THE KIT

A. PARTS REMOVAL

1. Unlock and open the Cabinet Door.
2. Shut off the outside water supply to the Cabinet.
3. Move the Main Switch in the Cabinet to the OFF position.

NOTE

Step 4 applies only to a Merchandiser that has the Cup Delivery Compartment installed in the Cabinet.

4. Swing out and remove the Cup Delivery Compartment from the Cabinet.
5. Remove the Cover from the Water Bath as follows:
 - a. Lift the Cover off the Water Bath to clear the lines.
 - b. Move the Cover to the right and then forward off the Water Bath.
6. Drain the water from the Water Feeder Tube by unclamping and removing the Tube at the Water Pump and inserting the Tube into the Water Bath Tank. After draining, replace the Tube on the Water Pump and clamp in place. See Figure 1 or 2.
7. Drain the Water Bath as follows:
 - a. Empty the Waste Pail and place in front of the Cabinet.
 - b. Unclip the Water Bath Water Level Tube and place the Tube in the Waste Pail. Warm water may be poured into the Water Bath to melt any remaining ice in the Water Bath.
 - c. After the Water Bath is empty, replace the Water Level Tube.

NOTE

Steps 8 and 9 apply to a Merchandiser equipped with an Automatic Ice Maker Cleaning System.

8. Unclamp and remove from the rear of the Normal Vend Shut-Off Plug on the Cleaning System Module the hose that leads to the Water Cooling Coil of the Water Bath. See Figure 1.
9. Remove the Hose Connector, the Belleville Washer and Normal Vend Shut-off Plug from the Cleaning System Module. Keep the Normal Vend Shut-Off Plug for installing the Kit. See Figure 1, View A.

NOTE

Steps 10 and 11 apply to a Merchandiser that is not equipped with an Automatic Ice Maker Cleaning System.

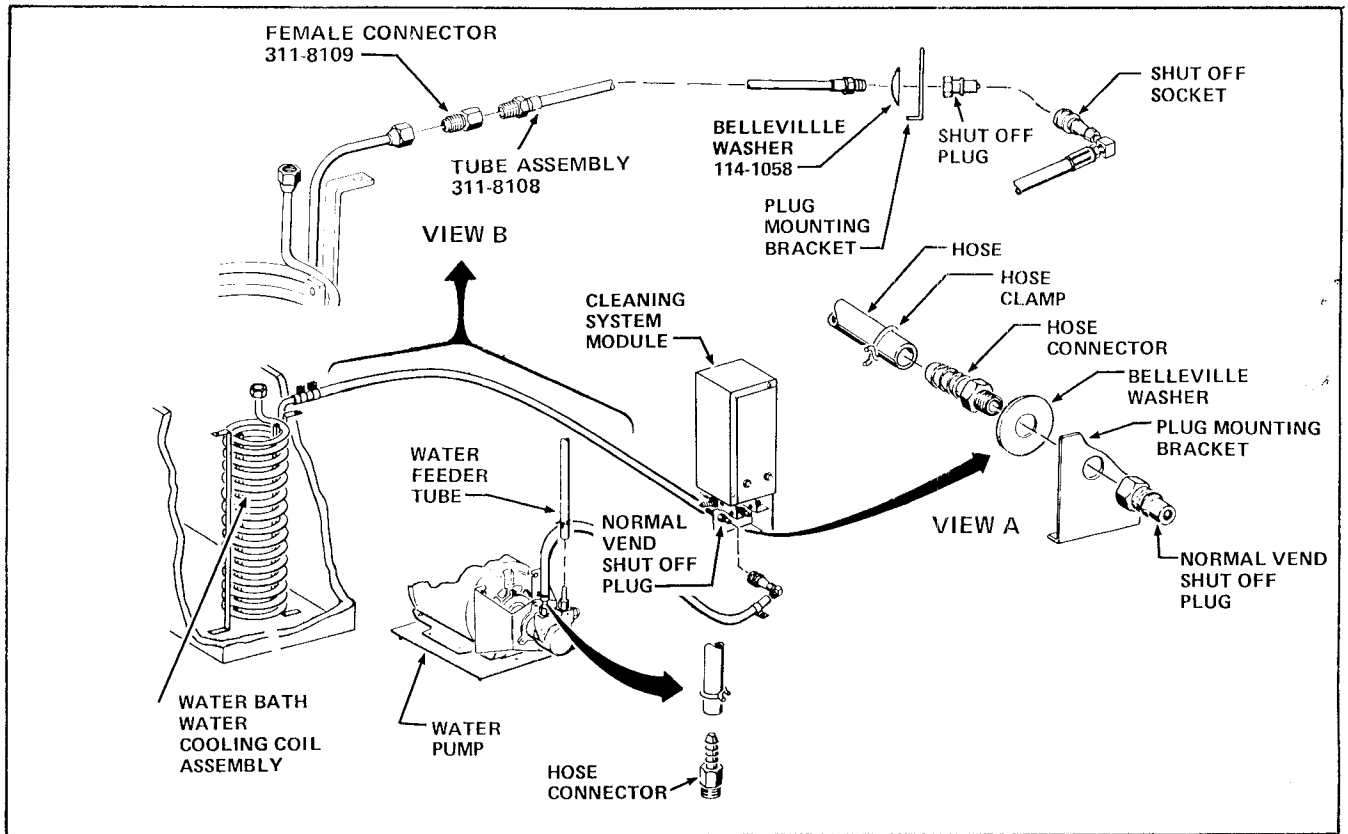


FIGURE 1

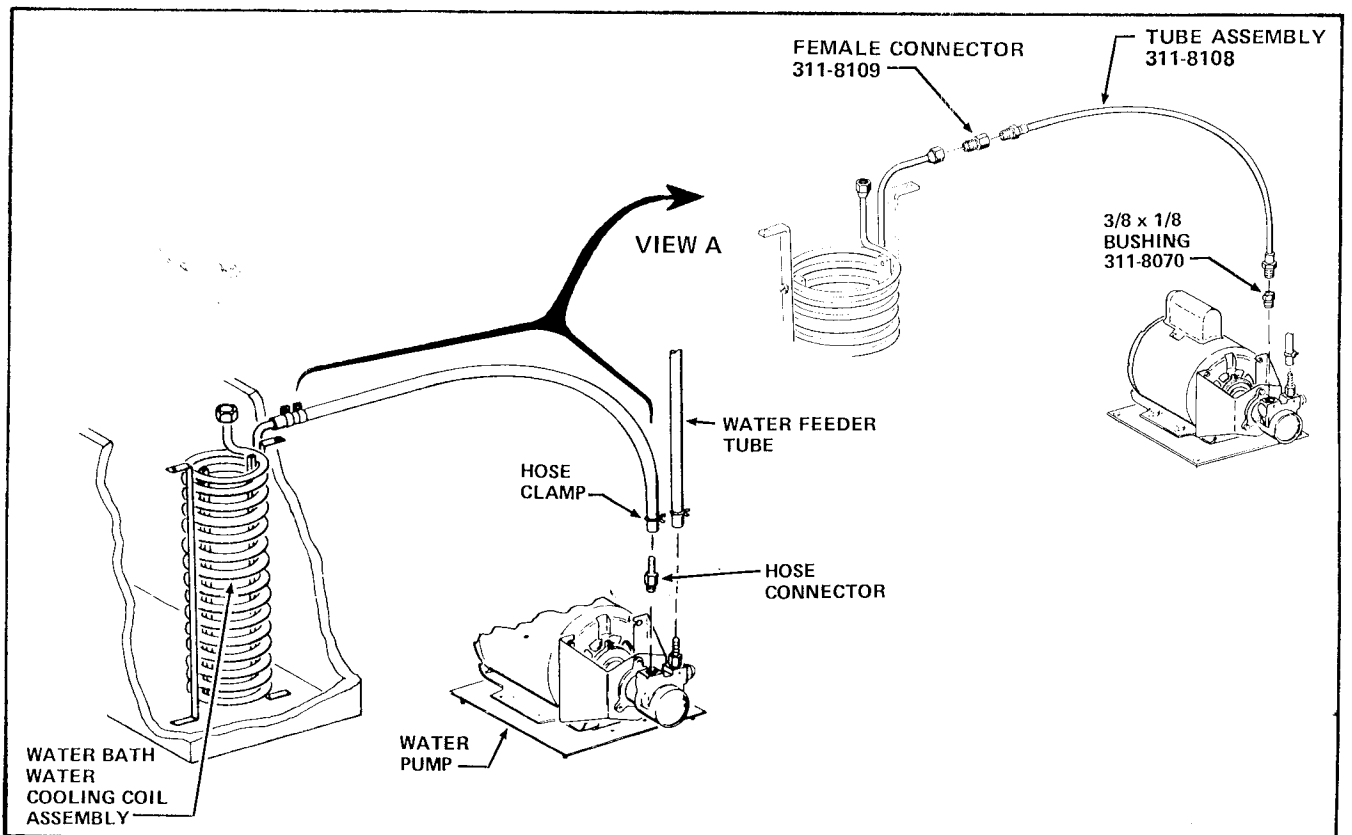


FIGURE 2

10. Unclamp and disconnect from the Water Pump the hose that leads to the Water Cooling Coil of the Water Bath. See Figure 2.
11. Remove the left Hose Connector from the Water Pump. See Figure 2.
12. Turn the CO₂ Cylinder Valve to the "OFF" position.
13. Remove the CO₂ Hose from the Carbonator. See Figure 3.

NOTE

Step 14 applies only to a Merchandiser equipped with a Water Thermometer on the Water Bath Assembly.

14. Remove the Water Thermometer from the Water Bath by removing the two Screws and Clamp. See Figure 3.

CAUTION

Tag the wires connected to the Carbonator Electrodes. The Merchandiser will not operate properly if the Carbonator Electrode Wires are interchanged.

15. Tag and remove the Cabinet Water Bath Harness Wires from the Carbonator Electrodes and from the Ground Screw on the Carbonator Mounting Bracket. The Electrode at the right is the Long Electrode and the Electrode at the left is the Short Electrode. See Figure 4.
16. Remove and retain the two Screws that attach the Syrup Discharge Spout and Mounting Bracket to the Water Bath. See Figure 3.

WARNING

The Carbonator in the Water Bath is a pressurized container and must be discharged of CO₂ before disconnecting the first tube from the Carbonator.

17. Discharge the Carbonator of CO₂ by lifting the body of the Pop-Off Valve with the blade of a Screwdriver. See Figure 4.

NOTE

Steps 18 thru 20 apply to a Merchandiser that either vends Tea, or has a Vent Valve installed on the Water Bath Assembly. See Figure 5 thru 7.

18. For a Merchandiser that vends Tea, but has no Vent Valve installed on the Water Bath Assembly:

- a. Unclamp and remove from the Syrup Discharge Spout Assembly the Tube that leads to the Tea Dispenser. See Figure 5.
- b. Unclamp and remove from the Tea Water Solenoid Valve the tube that leads to the Tea Dispenser. Tag the tube, "Tea Water Solenoid". See Figure 5.

CAUTION

Do not damage rigid Tube Assemblies. Use two wrenches.

- c. Disconnect at the Carbonator and the Non-Carbonated Water Solenoid Valve the Tubes that lead to the Tea Water Solenoid Valve. See Figure 5.
 - d. Remove the Tea Water Solenoid Valve and Bracket from the Water Bath by loosening the Screw in the keyhole-shaped mounting hole at the base of the Bracket. See Figure 5.
 - e. Disconnect the Tube going from the Tea Water Solenoid Valve to the Non Carbonated Water Solenoid Valve and replace with the Tea Valve to Water Valve Tube Assembly, Part Number 310-7049, included in the Kit. See Figure 5.
 - f. Disconnect the Tube going from the Tea Water Solenoid Valve to the Carbonator and replace with the Carb to 3 Way Valve Tube Assembly, Part Number 310-8147, included in the Kit. See Figure 5.
19. For a Merchandiser that vends Tea and has a Vent Valve installed on the Water Bath Assembly:
 - a. Unclamp and remove from the Syrup Discharge Spout Assembly the Tube that leads to the Tea Dispenser. See Figure 6.
 - b. Unclamp and remove from the Tea Water Solenoid Valve the Tube that leads to the Tea Dispenser Tag the Tube "Tea Water Solenoid". See Figure 6.

CAUTION

Do not damage rigid Tube Assemblies. Use two wrenches.

- c. Disconnect at the Carbonator the Tube that leads to the Vent Valve. See Figure 6.
- d. Disconnect at the Non-Carbonated Water Solenoid Valve the Tube that leads to the Tea Water Solenoid Valve. See Figure 6.

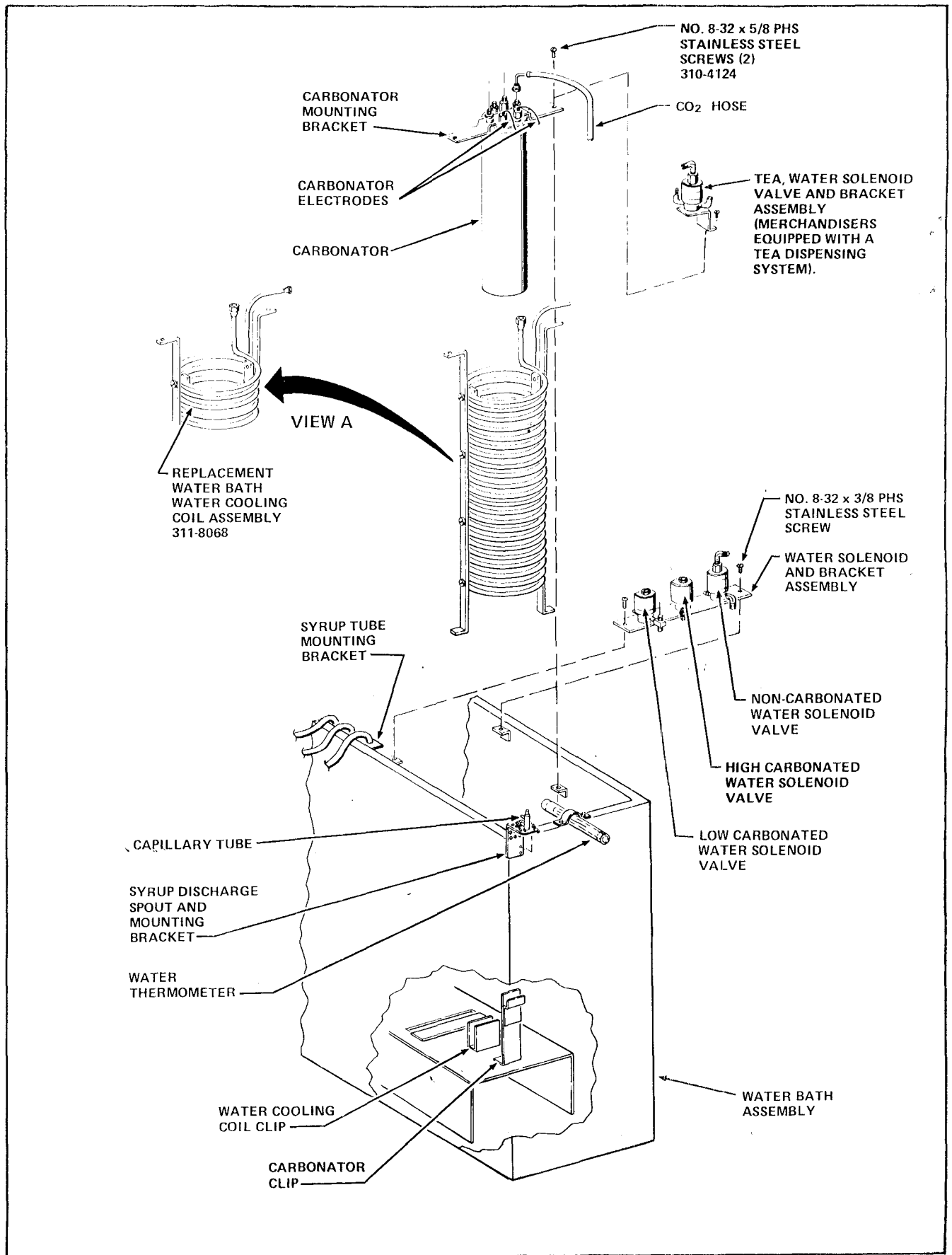


FIGURE 3

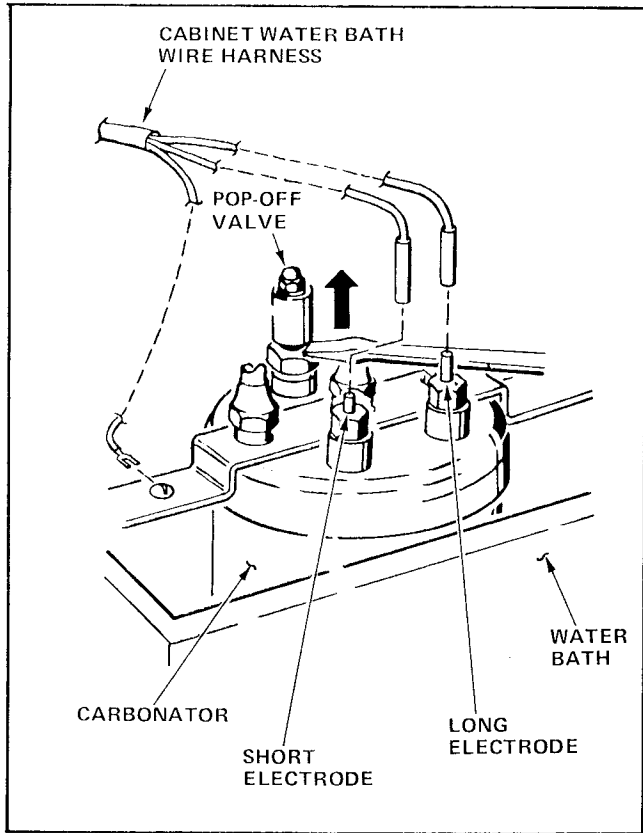


FIGURE 4

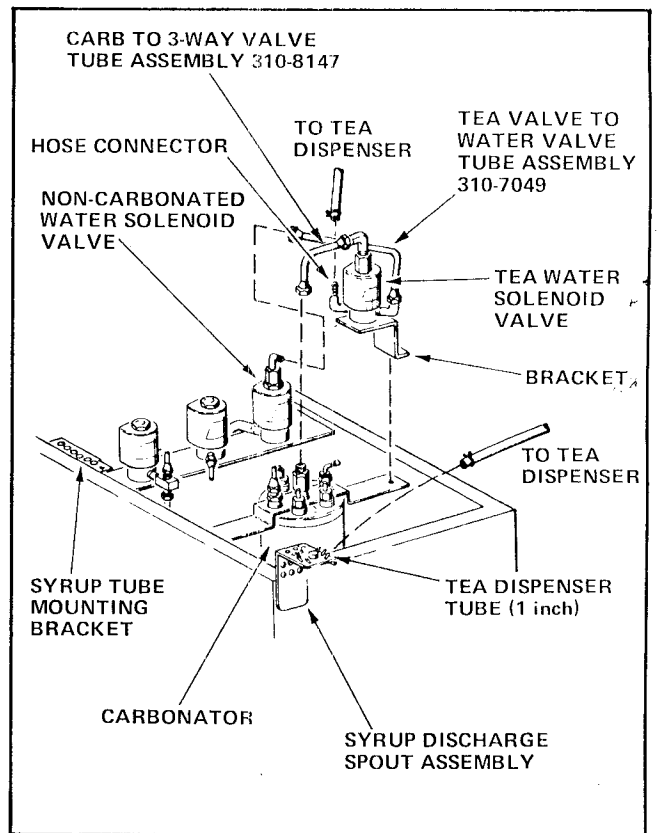


FIGURE 5

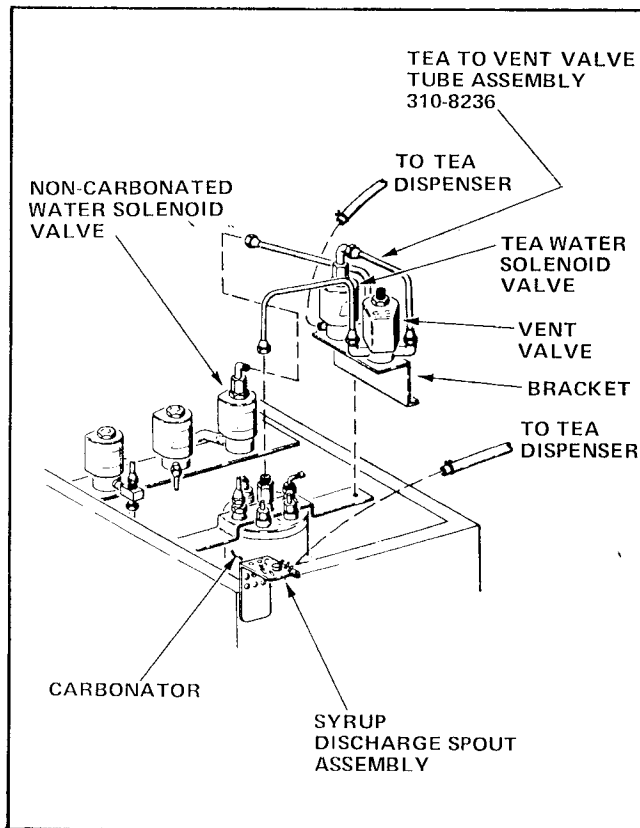


FIGURE 6

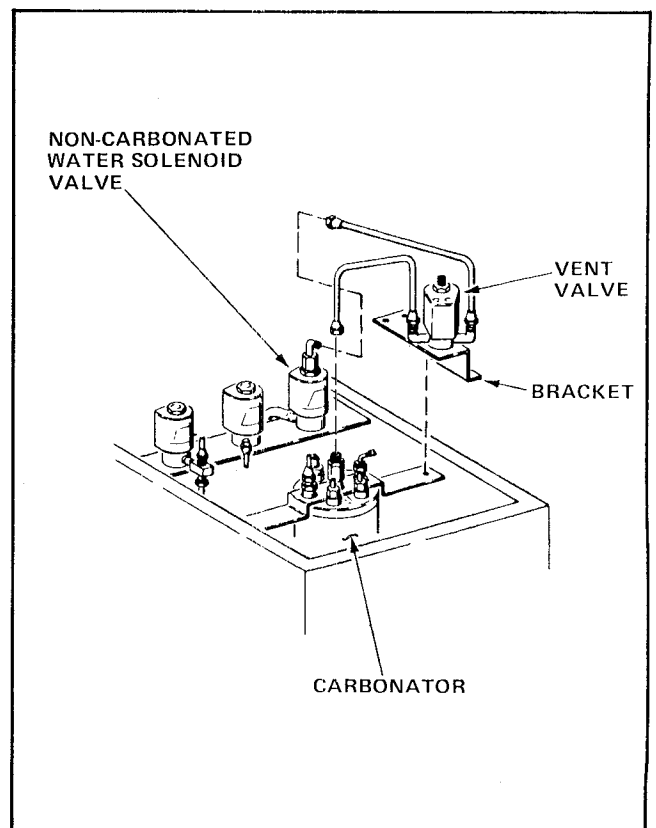


FIGURE 7

- e. Remove the Tea Water Solenoid Valve, the Vent Valve, and Bracket from the Water Bath by loosening the Screw in the keyhole-shape mounting hole at the base of the Bracket. See Figure 6.
 - f. Disconnect and remove the Tube going from the Tea Water Solenoid Valve to the Vent Valve Tube Assembly, Part Number 310-8236, included in the Kit. See Figure 6.
20. For a Merchandiser that does not vend Tea, but has a Vent Valve installed on the Water Bath Assembly:

CAUTION

Do not damage rigid Tube Assemblies. Use two wrenches.

- a. Disconnect at the Carbonator and the Non-Carbonated Water Solenoid Valve the Tubes that lead to the Vent Valve. See Figure 7.
 - b. Remove the Vent Valve and Bracket from the Water Bath by loosening the Screw in the keyhole-shaped mounting hole at the base of the Bracket. See Figure 7.
21. Remove the Water Solenoid and Bracket Assembly from the Water Bath as follows:

CAUTION

Do not damage rigid Tube Assemblies. Use two wrenches.

- a. Disconnect the Low-Carbonated Water Solenoid Valve Tube at the Carbonator. See Figure 8.
- b. Disconnect the Capillary Tube leading to the Syrup Discharge Spout Assembly and Mounting Bracket from the High-Carbonated Water Valve. See Figure 8.
- c. Disconnect the Non-Carbonated Water Solenoid Valve from the Water Bath Water Cooling Coil. See Figure 8.

NOTE

Steps "d" and "e" apply only to a Merchandiser that is not equipped with a Tea Dispensing System.

- d. Disconnect the Non-Carbonated Valve Tube Assembly at the Carbonator. See Figure 8.
 - e. Disconnect and remove the Non-Carbonated Valve Tube Assembly from the Non-Carbonated Water Solenoid Valve and replace with Non-Carbonated Valve Tube Assembly, Part Number 310-8148, included in the Kit. See Figure 8.
 - f. Carefully remove and retain the two Screws that attach the Water Solenoid and Bracket Assembly to the Water Bath.
22. Carefully remove the Carbonator Mounting Bracket and Carbonator from the Water Bath Assembly by removing the Screw from each end of the Carbonator Mounting Bracket. See Figure 3.

CAUTION

Do not damage the Capillary Tube attached to the Syrup Discharge Spout and Mounting Bracket.

- 23. Lift and remove the Water Bath Water Cooling Coil Assembly from the Water Bath Assembly. See Figure 3.

B. INSTALLATION OF THE REMAINING PARTS OF THE KIT

CAUTION

Do not damage the Capillary Tube attached to the Syrup Discharge Spout.

- 1. Carefully place the replacement Water Bath Water Cooling Coil Assembly, Part Number 311-8068, included in the Kit, in the Water Bath Assembly with the Elbow shaped end of Coil projecting over the right side of the Water Bath Assembly. The bottom Coil of the replacement Water Bath Water Cooling Coil Assembly fits into the short clip at bottom of Water Bath Assembly. See Figure 3.
- 2. Install the Carbonator and Carbonator Mounting Bracket in the Water Bath Assembly with the Carbonator Electrodes toward the front of Water Bath Assembly. The lower end of Carbonator fits into the tall clip at bottom of Water Bath Assembly. See Figure 3.

3. Carefully attach the Carbonator Mounting Bracket and replacement Water Cooling Coil Assembly to the Water Bath Assembly with the two No. 8-32 x 5/8" Pan Head Slotted Stainless Steel Screws, Part Number 310-4124, included in the Kit. See Figure 3.
4. Install the Water Solenoid and Bracket Assembly on the Water Bath as follows:

CAUTION

Do not damage rigid Tube Assemblies. Use two wrenches.

- a. Attach the Water Solenoid and Bracket Assembly on the Water Bath Assembly with two No. 8-32 x 3/8" Pan Head Stainless Steel Screws. The Syrup Tube Mounting Bracket located at the left and inside the Water Bath fits between the Water Solenoid and Bracket Assembly and the attaching Bracket on the Water Bath. See Figure 3.
- b. Connect the Non-Carbonated Water Solenoid Valve to the Water Cooling Coil Assembly. See Figure 8.

NOTE

Step "c" applies only to a Merchandiser that is not equipped with a Tea Dispensing System.

- c. Connect the Non-Carbonated Valve Tube Assembly to the CARbonator. See Figure 8.
- d. Connect the Capillary Tube from the Syrup Discharge Spout and Mounting Bracket to the High-Carbonated Water Solenoid Valve. See Figure 8.
- e. Connect the Low-Carbonated Water Solenoid Valve Tube to the Carbonator. See Figure 8.

NOTE

Steps 5 thru 7 apply to a Merchandiser that vends Tea or requires a Vent Valve. See Figure 5 thru 7.

5. For a Merchandiser that vends Tea but does not have a Vent Valve:
 - a. Attach the Tea Water Solenoid Valve and Bracket, that was removed in Step 18 of Part A, to the Pan Head Slotted Screw located at the right end of the Carbonator Mounting Bracket. Do not remove the Screw. See Figure 5.
 - b. Clamp the Tube tagged "Tea Water Solenoid" in Step 18b of Part A to the Hose Connector fitting on the Tea Water Solenoid. See Figure 5.

- c. Clamp the Tube, leading from the Tea Dispenser, to the Tea Dispensing Tube on the Syrup Discharge Spout Assembly. See Figure 5.

CAUTION

Do not damage rigid Tube Assemblies. Use two wrenches.

- d. Connect the Tubes leading from the Tea Water Solenoid Valve to the Carbonator and Non-Carbonated Water Solenoid Valve. Tighten the flare nuts. See Figure 5.
6. For a Merchandiser that vends Tea and has a Vent Valve:
 - a. Attach the Tea Water Solenoid Valve, the Vent Valve and Bracket, that was removed in Step 19 of Part A, to the Pan Head Slotted Screw located at the right end of the Carbonator Mounting Bracket. Do not remove the Screw. See Figure 6.
 - b. Clamp the Tube tagged "Tea Water Solenoid" in Step 19b of Part A to the Hose Connector fitting on the Tea Water Solenoid Valve. See Figure 6.
 - c. Clamp the Tube, leading from the Tea Dispenser, to the Tea Dispensing Tube on the Syrup Discharge Spout Assembly. See Figure 6.

CAUTION

Do not damage rigid Tube Assemblies. Use two wrenches.

- d. Connect the Tube Assembly that leads from the Vent Valve to the Carbonator. Tighten the flare Nuts. See Figure 6.
- e. Connect the Tube Assembly that leads from the Tea Water Solenoid Valve to the Non-Carbonated Water Solenoid Valve. Tighten the flare Nuts. See Figure 6.
7. For a Merchandiser that does not vend Tea, but has a Vent Valve:
 - a. Attach the Vent Valve and Bracket, that was removed in Step 20 of Part A, to the Pan Head Slotted Screw located at the right end of the Carbonator Mounting Bracket. Do not remove the Screw. See Figure 7.

CAUTION

Do not damage rigid Tube Assemblies. Use two wrenches.

- b. Connect the Tubes leading from the Vent Valve to the Carbonator and Non-Carbonated Water Solenoid Valve. Tighten the flare Nuts. See Figure 7.
8. Tighten all rigid tube connections between the Water Cooling Coil Assembly, the Carbonator and Water Solenoid Valves.
9. Tighten the Screws that attach the Water Solenoid and Bracket Assembly, and the Carbonator Mounting Bracket to the Water Bath.
10. Attach the Syrup Discharge Spout and Mounting Bracket to the Water Bath with the two Screws removed in Step 16 of Part A. See Figure 3.
16. Connect one end of the Tube Assembly, Part Number 311-8108, to the replacement Bushing, Part Number 311-8070, both parts included in the Kit, and connect the Bushing to the Water Pump Outlet. See Figure 2 View A.
17. Connect the Female Connector, Part Number 311-8109, included in the Kit, to the Water Bath Water Cooling Coil Assembly then connect the free end of the replacement Tube Assembly to the Female Connector. See Figure 2 View A.
18. Turn on the outside water supply to the Cabinet.
19. Fill the Water Bath Tank by inserting the Convenience Water Tube into the Water Bath and opening the Convenience Water Valve.

CAUTION

The Merchandiser will not operate properly if the Carbonator Electrode Wires are interchanged.

11. Attach the Cabinet Water Bath Harness Wires to the proper Carbonator Electrodes as tagged in Step 15 and to the Screw on the Carbonator Mounting Bracket. See Figure 4.

NOTE

Step 12 applies only to a Merchandiser equipped with a Water Thermometer on the Water Bath Assembly.

12. Install the Water Thermometer, Clamp, and two Screws on the front edge of the Water Bath. See Figure 3.
13. Attach the CO₂ Hose, that is connected to the CO₂ Cylinder, to the Carbonator. See Figure 3.

NOTE

Steps 14 and 15 apply to a Merchandiser equipped with an Automatic Ice Maker Cleaning System.

14. Install the Normal Vend Shut-off Plug, that was removed in Step 9 of Part A, the Belleville Washer, Part Number 114-1058, included in the Kit, and Tube Assembly, Part Number 311-8108, included in the Kit, on the Cleaning System Module. The concave side of the Belleville Washer rests against the Plug Mounting Bracket of the Cleaning System Module. See Figure 1, View B.
15. Connect the Female Connector, Part Number 311-8109, included in the Kit, to the Water Bath Water Cooling Coil Assembly then connect the free end of the replacement Tube Assembly to the Female Connector. See Figure 1 View B.

NOTE

Steps 16 and 17 apply to a Merchandiser not equipped with an Automatic Ice Maker Cleaning System.

NOTE

The proper water level is reached when the water starts to drip from the Drain Tube which is at the front of the Water Bath. The Drain Tube, being clear plastic, acts as a sight glass showing the water level in the Water Bath, as well as a device for draining the Water Bath. If the Merchandiser is to be started under conditions of high ambient temperature, fill the Water Bath half full, allow the water to cool, and then fill the Water Bath the rest of the way. An alternate method that is very effective when a Merchandiser is started at a time of high ambient temperature is to pour a bag of ice into the Water Bath and then fill the Water Bath with water. This method greatly reduces the load on the Refrigeration Unit, especially when the unit is started after being inoperative for a prolonged period.

20. Place the Merchandiser Waste Pail in the Cabinet in front of the Water Bath.
21. Slowly open the valve on the Merchandiser CO₂ Cylinder and observe the CO₂ pressure to the Carbonator. The proper guage pressure reading should be approximately "60".
22. Move the Main Switch in the Cabinet to the "ON" position. The refrigeration system will be energized.

NOTE

1. *Water will enter the Water Feeder Cup and then into the Ice Maker and Water Pump. From the Water Pump, the water enters the Water Bath Water Cooling Coil and the Carbonator. The Display Lights will lite when the flow of water in the water system is completed.*
2. *The refrigeration system will remain energized until the Ice Maker is filled with ice and the ice bank build up in the Water Bath is completed.*

23. Check for and repair all water leaks.

24. Remove any air trapped in the Carbonator by inserting the blade of a screwdriver momentarily under the body of the Pop-off Valve on the Carbonator. See Figure 4.
25. Install the Cover on the Water Bath.
26. Install the Cup Delivery Compartment in Cabinet, if applicable.
27. Check the ice in the Ice Hopper as follows:

- a. Move the Main Switch in the Cabinet to the "OFF" position.
- b. Remove the two Screws and Cover from the Ice Hopper.
- c. Check for and remove any ice chunks found in the Ice Hopper.
- d. Install the Cover and two Screws on the Hopper.
- e. Move the Main Switch in the Cabinet to the "ON" position.

NOTE

The Ice Maker will not properly dispense ice if the ice in the Hopper becomes bridged.

28. Test vend the Merchandiser.
29. Close and lock the Cabinet Door.

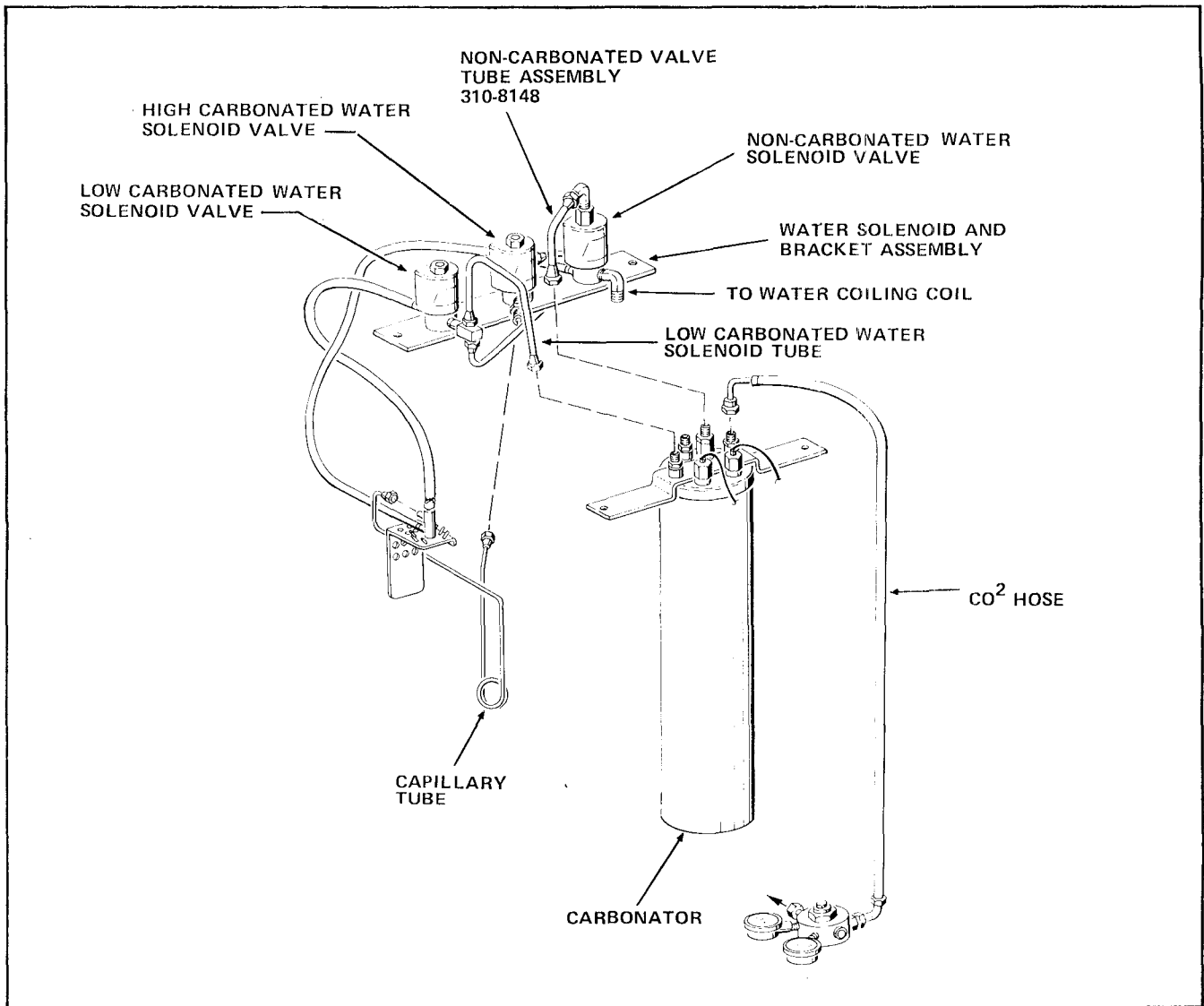


FIGURE 8