

INSTRUCTIONS FOR INSTALLING THE HIGH PRESSURE WATER TUBE ASSEMBLY REPLACEMENT KIT IN A NATIONAL VENDORS[®], MODULINE CDM(64 INCH), A CROWN SEVENTY TWO[®] SERIES CDM-72, OR A CROWN SEVENTY TWO[®] CDM-72A COLD DRINK MERCHANDISER

These instructions cover the procedure for installing the High Pressure Water Tube Assembly Replacement Kit, Part Number 311-8110, in a National Vendors Moduline CDM (64 inch), a Crown Seventy Two CDM-72, or a Crown Seventy Two CDM-72A Cold Drink Merchandiser.

The High Pressure Water Tube Assembly, Part Number 311-8108, included with this Kit, is a universal replacement Tube Assembly.

Read these Instructions thoroughly and carefully prior to installing the Kit. Retain these Instructions for part number and installation information.

Kit, Part Number 311-8110, contains the following parts:

Part Number	Description	Quantity
311-8108	High Pressure Water Tube Assembly	1
311-8071	Female Compression Connector	1
114-1058	1.141" x .406" x .028"	
	Belleville Washer	1
310-8055	5/8" Hose Clamp	1
311-8070	3/8" x 1/8" Bushing	1
311-8109	3/8" x 3/8" Female Connector	1
311-8107	Installation Instructions	1

Special Tools and Material Required:

Tube Cutter, with heavy duty wheel
Flaring Block

TO INSTALL THE KIT

I. PARTS REMOVAL

NOTE

Perform only Step A, B, or C as applicable to the High Pressure Water Tube being replaced.

- A. To remove the Water Pump to Water Cooling Coil Hose.

1. Unlock and open the Merchandiser Door.
2. Move the Main Switch to the OFF position. See Figure 1.

3. Disconnect and remove the CO₂ Cylinder. Place the CO₂ Cylinder in a safe place away from the work area.
4. On some Moduline CDM's (having the Cup Compartment mounted on the Water Bath), the CDM-72, and the CDM-72A, rotate the Cup Compartment and Chute Assembly to the right, lift, and remove from the Merchandiser. See Figure 2.
5. On Merchandisers equipped to vend Tea, remove the Tea Dispensing Outlet Spout from the Blender Housing by squeezing the ends of the Clip and pulling down on the Tea Dispensing Outlet Spout. Lay aside on the Syrup Tanks. See Figure 3.
6. Remove the Water Bath Cover. See Figure 2.
7. Remove the Water Filter and place the Waste Pail under the Water Pump.
8. Remove the Water Feeder Cup Hose and Hose Clamp from the Water Pump Inlet Port and drain into the Waste Pail. See Figure 4.

NOTE

If the Cooling Coil attaches to the High Pressure Water Tube with a Flared Connector; disregard Steps A9 through A11 and simply disconnect the Tube from the Cooling Coil with a wrench. See Figure 4a.

9. At the Water Cooling Coil, loosen and move two Clamps attaching the Hose that connects to the Water Pump. See Figure 4.

NOTE

1. Twist and pull the Hose from the Water Cooling Coil.
2. If the Hose separates from the Stainless Steel Tubing, proceed with Step 12.
3. If the Hose does not separate, read the following Caution statement and then proceed with Step 10.

CAUTION

When cutting the rubber Hose, be very careful not to cut into the Water Cooling Coil. The Compression Fitting may not seal a cut in the Stainless Steel Tubing.

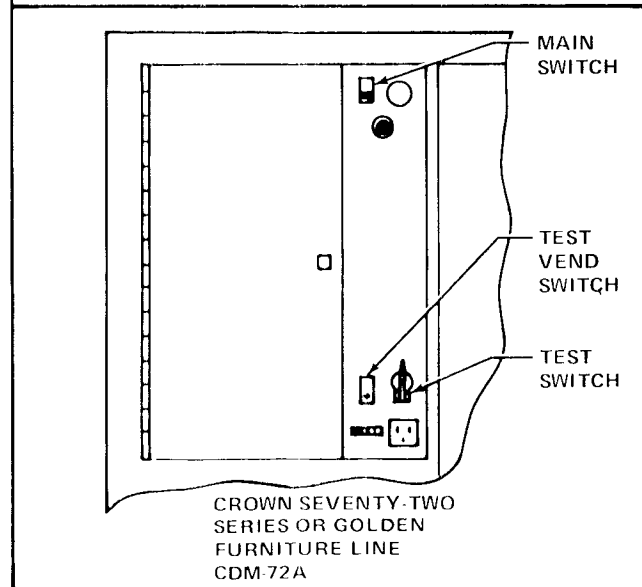
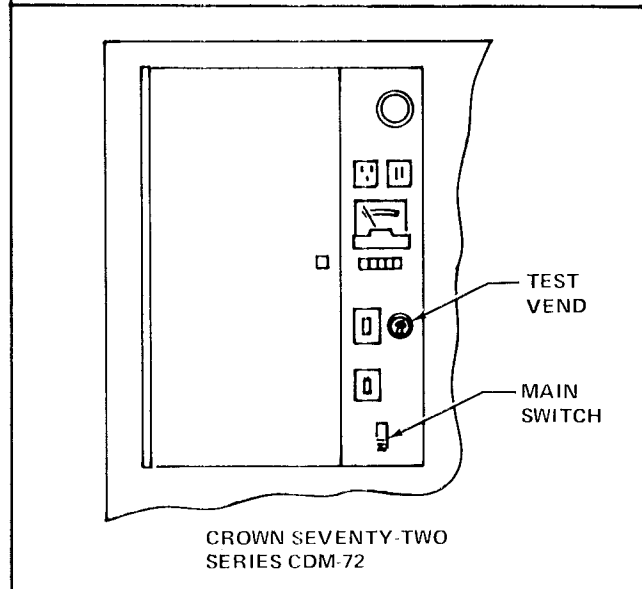
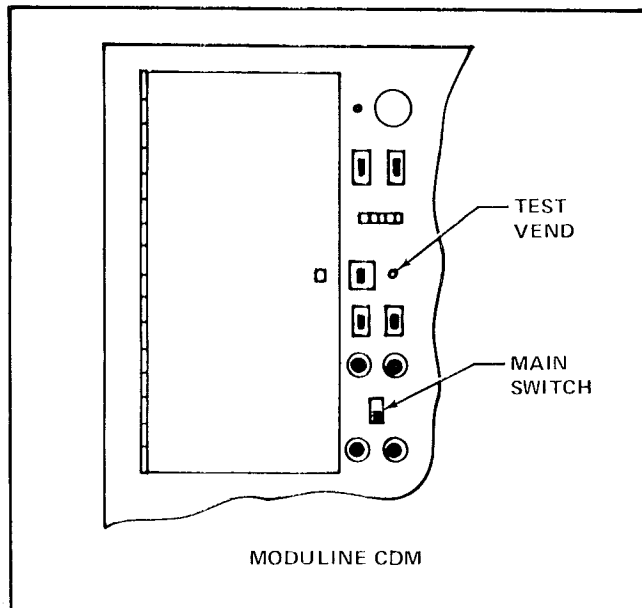


FIGURE 1

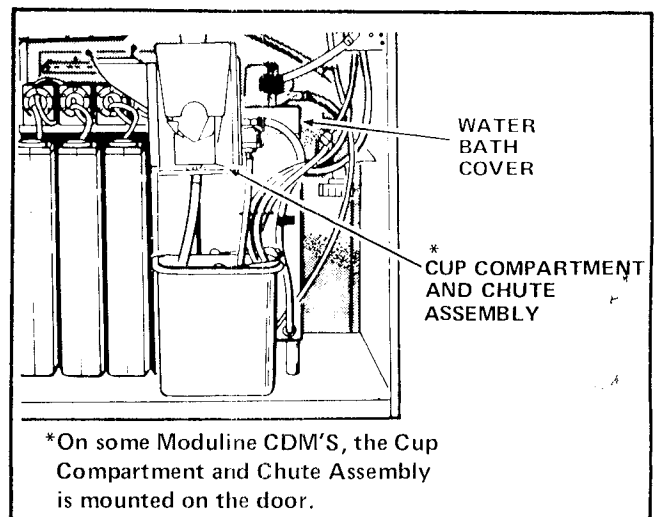


FIGURE 2

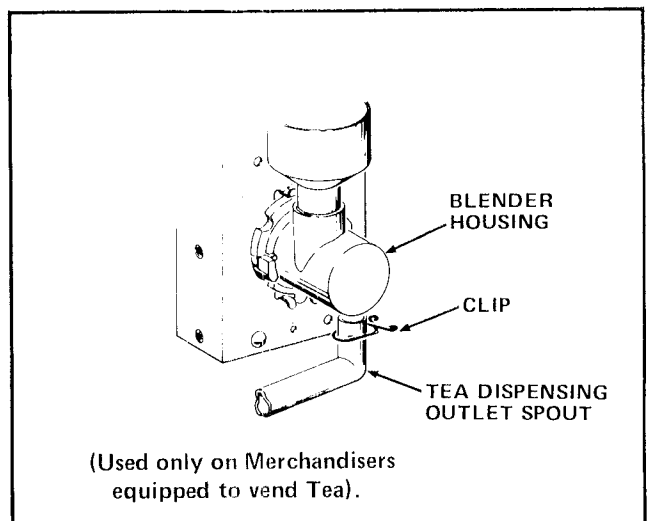


FIGURE 3

10. At the Water Cooling Coil, cut the Hose from the Water Pump lengthwise deep enough so that the Hose can be peeled from the Stainless Steel Tubing. See View A of Figure 5.
 11. Peel the Water Pump to Water Cooling Coil Hose from the Stainless Steel Tubing. See View B of Figure 5.
 12. Remove the Water Pump to Water Cooling Coil Hose and Hose Connector from the Water Pump Outlet Port. See Figure 4.
- B. To remove the Cool-San Cleaning System Module to Water Cooling Coil Hose.
1. Unlock and open the Merchandiser Door.
 2. Move the Main Switch to the OFF position. See Figure 1.

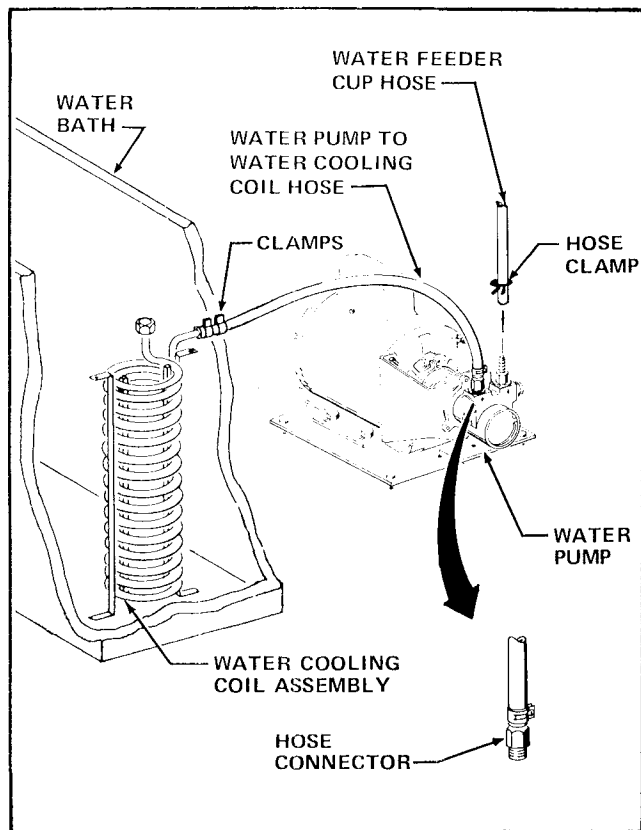


FIGURE 4

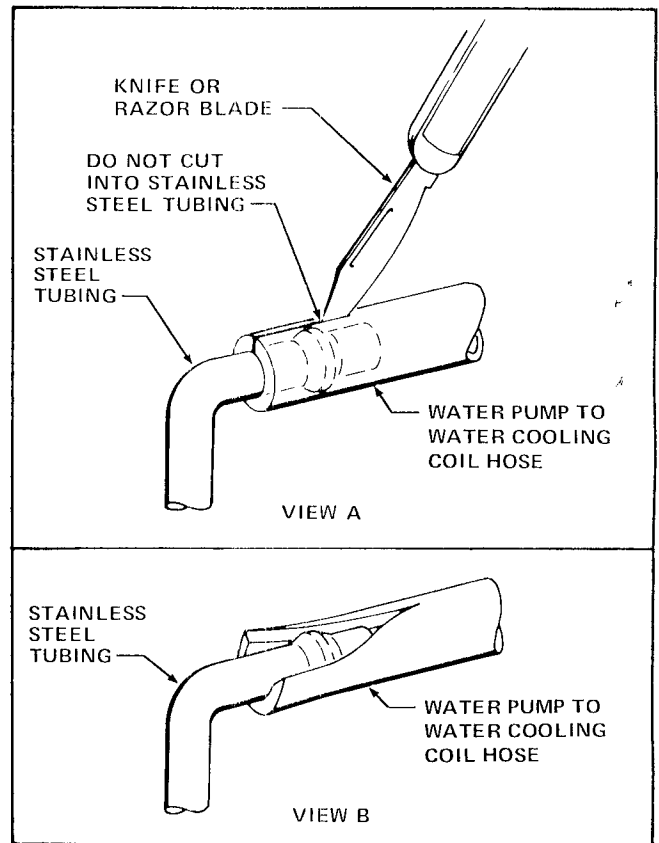


FIGURE 5

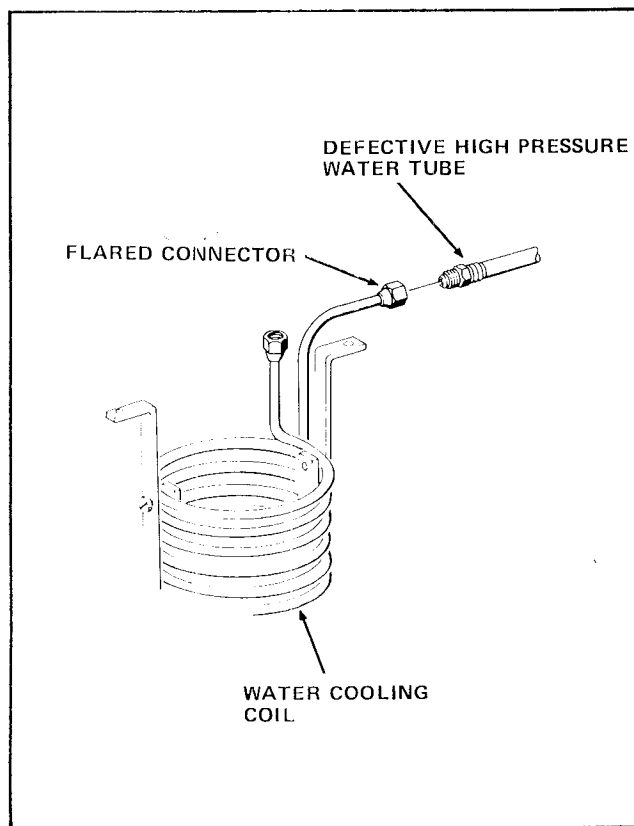


FIGURE 4a

3. Disconnect and remove the CO₂ Cylinder. Place the CO₂ Cylinder in a safe place away from the work area.
4. Rotate the Cup Compartment and Chute Assembly to the right, lift, and remove from the Merchandiser. See Figure 2.
5. On Merchandisers equipped to vend Tea, remove the Tea Dispensing Outlet Spout from the Blender Housing by squeezing the ends of the Clip and pulling down on the Tea Dispensing Outlet Spout. Lay aside on the Syrup Tanks. See Figure 3.
6. Remove the Water Bath Cover. See Figure 2.
7. Remove the Water Filter and place the Waste Pail under the Water Pump.
8. Remove the Water Feeder Cup Hose and Hose Clamp from the Water Pump Inlet Port and drain into the Waste Pail. See Figure 6.

NOTE

If the Cooling Coil attaches to the High Pressure Water Tube with a Flared connector, disregard Steps B9 through B11 and simply disconnect the Tube from the Cooling Coil with a wrench. See Figure 4a.

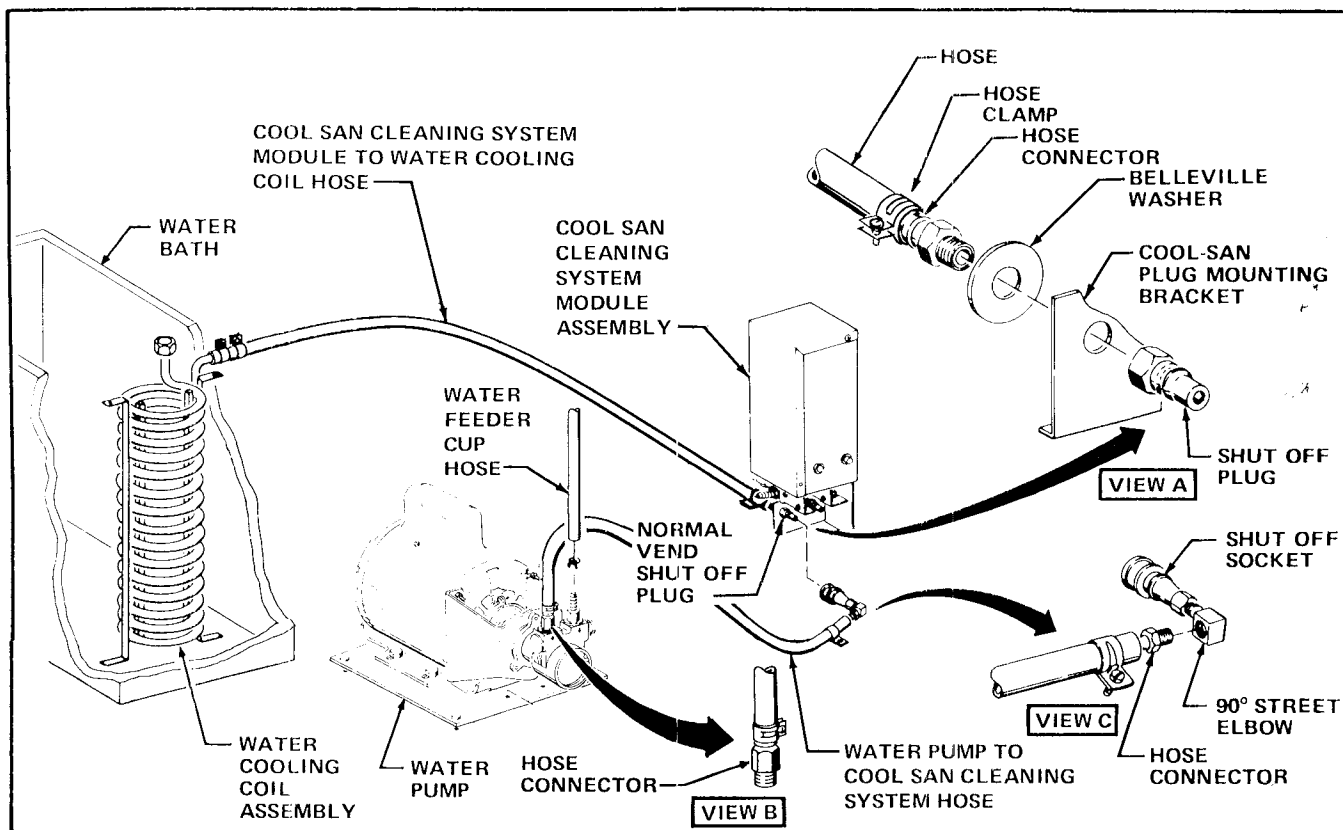


FIGURE 6

9. At the Water Cooling Coil, loosen and move two Clamps attaching the Hose from the Cool-San[®] Cleaning System Module to the Water Cooling Coil. See Figure 6.

NOTE

1. *Twist and pull the Hose from the Water Cooling Coil.*
2. *If the Hose separates from the Stainless Steel Tubing, proceed with step 12.*
3. *If the Hose does not separate, read the following Caution statement and then proceed with step 10.*

CAUTION

When cutting the rubber Hose, be very careful not to cut into the Water Cooling Coil. The Compression Fitting may not seal a cut in the Stainless Steel Tubing.

10. At the Water Cooling Coil, cut the Hose from the Cool San Cleaning System Module lengthwise deep enough so that the Hose can be peeled from the Stainless Steel Tubing. See View A of Figure 5.
11. Peel the Cool-San[®] Cleaning System Module to Water Cooling Coil Hose from the Stainless Steel Tubing. See View B of Figure 5.

12. Disconnect the Shut Off Socket from the Normal Vend Shut Off Plug. See Figure 6.
13. Remove the Shut Off Plug from the Hose Connector at the Cool San Cleaning System Module Plug Mounting Bracket. See View A of Figure 6. Retain the Shut Off Plug for reuse.
14. Remove the Hose, Hose Connector, and Belleville Washer from the Cool San Cleaning System Plug Mounting Bracket. See View A of Figure 6.

- C. To remove the Cool San[®] Cleaning System Module to Water Pump Hose.

1. Unlock and open the Merchandiser Door.
2. Move the Main Switch to the OFF position. See Figure 1.
3. Disconnect and remove the CO₂ Cylinder. Place the CO₂ Cylinder in a safe place away from the work area.
4. Rotate the Cup Compartment and Chute Assembly to the right, lift, and remove from the Merchandiser. See Figure 2.

5. On Merchandisers equipped to vend Tea, remove the Tea Dispensing Outlet Spout from the Blender Housing by squeezing the ends of the Clip and pulling down on the Tea Dispensing Outlet Spout. Lay aside on the Syrup Tanks. See Figure 3.
6. Remove the Water Bath Cover. See Figure 2.
7. Remove the Water Filter and place the Waste Pail under the Water Pump.
8. Remove the Water Feeder Cup Hose and Hose Clamp from the Water Pump Inlet Port and drain into the Waste Pail. See Figure 6.
9. Disconnect the Shut Off Socket from the Normal Vend Shut Off Plug. See Figure 6.
10. Remove the Cool San[®] Cleaning System Module to Water Pump Hose from the Water Pump Outlet Port. See View B of Figure 6.
11. Remove the 90 degree Street Elbow and Shut Off Socket from the Hose Connector and retain for re-use. See View C of Figure 6.

II. PARTS INSTALLATION

NOTE

1. *Perform only Step A,B, or C as applicable to the High Pressure Water Tube being installed.*
2. *Disregard Steps A1,A2,A4, and A6 if the Cooling Coil is attached to the High Pressure Water Tube with a Flared connector. See Figure 4a.*

A. To Install the Water Pump to Water Cooling Coil High Pressure Water Tube Assembly.

CAUTION

1. **DO NOT** remove the pipe thread tape from the threaded fittings in the Kit. The pipe thread tape makes a seal between fittings, when installed.
2. When cutting the Water Cooling Coil with a tube cutter, apply cutting pressure slowly and evenly. The Stainless Steel Tubing may crack or collapse if cutting pressure is applied too rapidly.

1. To remove the compression bead on the end of the Water Cooling Coil, use a tube cutter to cut the Stainless Steel Tubing. Position the tube cutter as close to the bead as possible. See Figure 7.

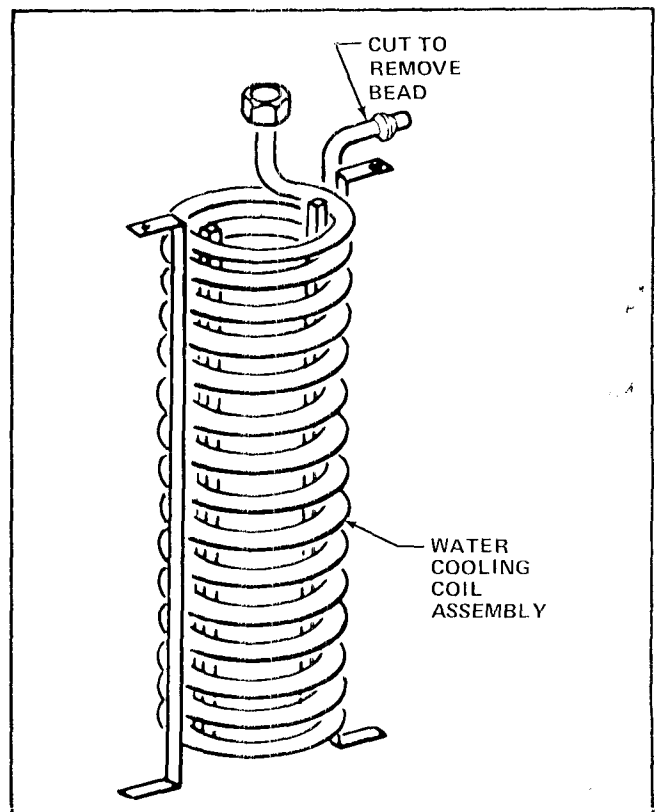


FIGURE 7

CAUTION

DO NOT flare the end of the Water Cooling Coil.

2. Use a flaring block to bring the cut end of the Water Cooling Coil back into round.

NOTE

If the Cooling Coil is equipped with a Flared Connector, install the Female Connector, Part Number 311-8109, included with this Kit, between the Coil and the replacement Tube Assembly. See Figure 7a.

3. Install the 3/8 x 1/8 Bushing, Part Number 311-8070, included in the Kit, on the 1/8 NPT Fitting of the High Pressure Water Tube Assembly, Part Number 311-8108, included in the Kit. See Figure 8.
4. Install the Female Compression Connector, Part Number 311-8071, included in the Kit, on the 3/8 NPT Fitting of the High Pressure Water Tube Assembly. See Figure 8.
5. Install the Bushing end of the High Pressure Water Tube Assembly in the Water Pump Outlet Port. See Figure 8.

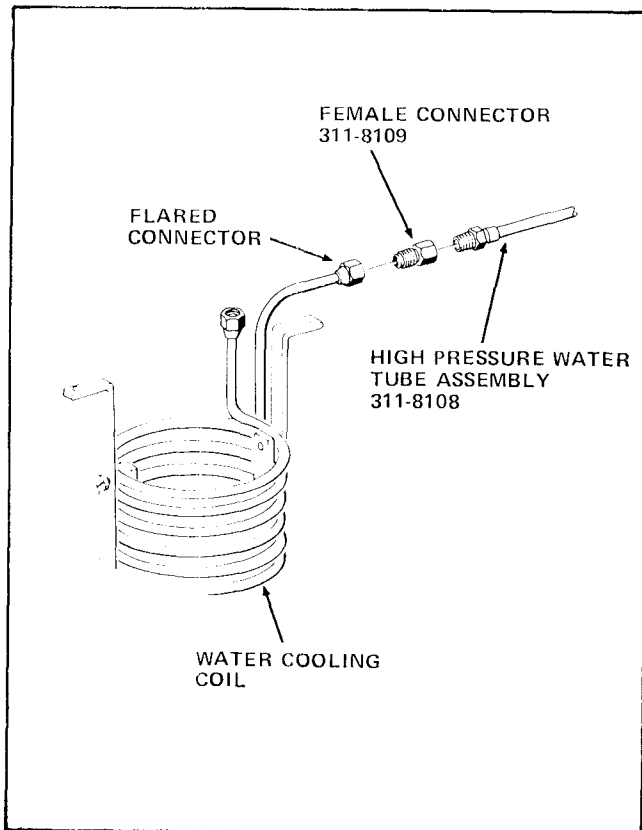


FIGURE 7a

6. Install the Female Compression Fitting end of the High Pressure Water Tube Assembly, over the end of the Water Cooling Coil. Tighten the Compression Nut finger tight and then turn an additional 1 1/2 turns, using two wrenches. See Figure 8.

7. Install the Water Feeder Cup Hose and Hose Clamp, Part Number 310-8055, included in the Kit, on the Hose Connector at the Inlet Port of the Water Pump. See Figure 8.

8. Install the Water Bath Cover on the Water Bath. See Figure 2.

9. On Merchandisers equipped to vend Tea, install the Tea Dispenser Outlet Spout. See Figure 3.

10. On some Moduline CDM's (having the Cup Compartment mounted on the Water Bath), the CDM-72, and the CDM-72A, install the Cup Compartment and Chute Assembly. See Figure 2.

11. Install the CO₂ Cylinder.

12. Install the Water Filter.

13. Go to Section III, Checks and Adjustments.

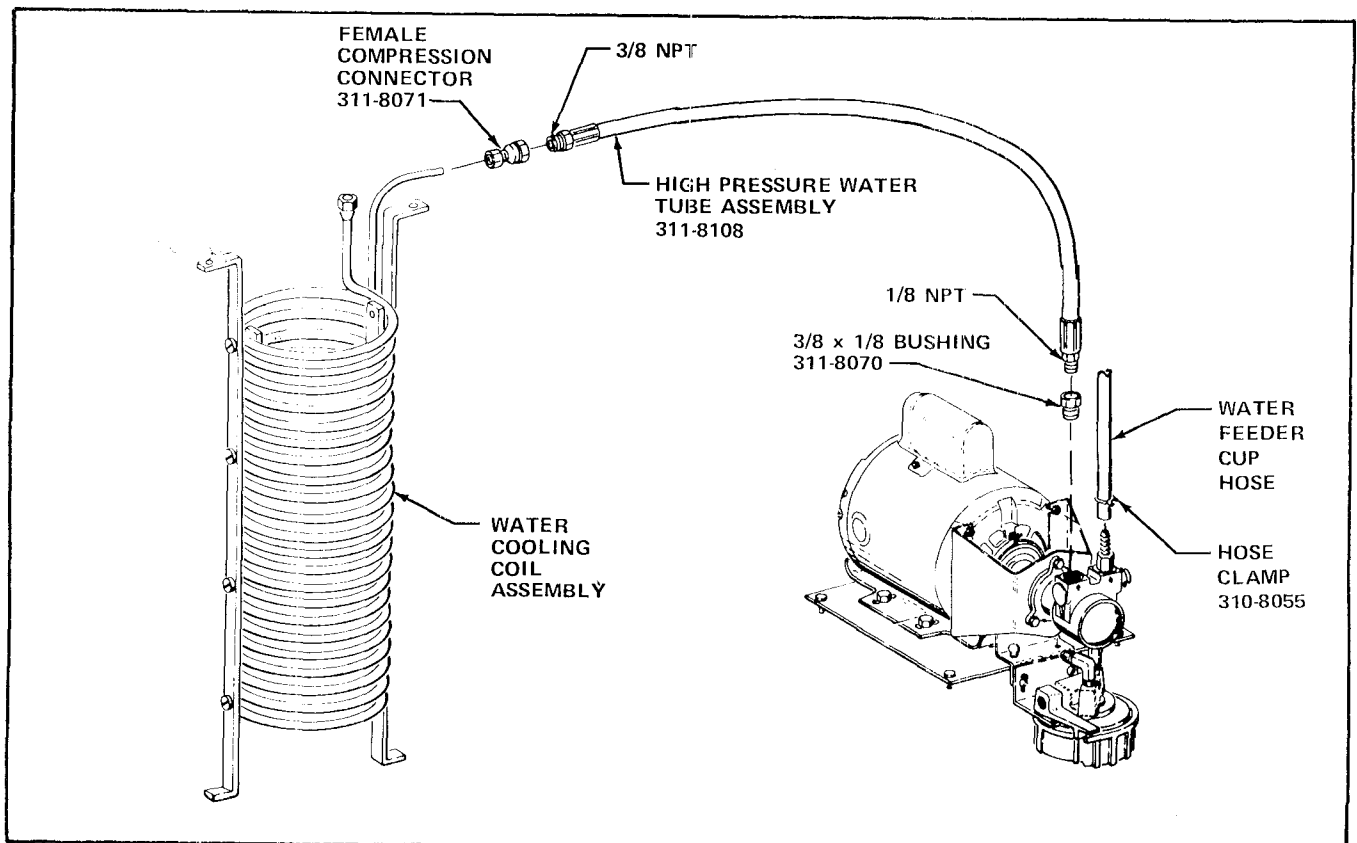


FIGURE 8

- B. To Install the Cool-San Cleaning System Module to Water Cooling Coil High Pressure Water Pump Tube Assembly.

NOTE

Disregard Steps B1, B2, B3, and B8 if the Cooling Coil is attached to the High Pressure Water Tube with a Flared Connector. See Figure 4a.

CAUTION

1. DO NOT remove the pipe thread tape from the threaded fittings in the Kit. The pipe thread tape makes a seal between fittings, when installed.
2. When cutting the Water Cooling Coil with a tube cutter, apply cutting pressure slowly and evenly. The Stainless Steel Tubing may crack or collapse if cutting pressure is applied too rapidly.

1. To remove the compression bead on the end of the Water Cooling Coil, use a tube cutter to cut the Stainless Steel Tubing. Position the tube cutter as close to the bead as possible. See Figure 7.

CAUTION

DO NOT flare the end of the Water Cooling Coil.

2. Use a flaring block to bring the cut end of the Water Cooling Coil back into round.

3. Install the Female Compression Connector, Part Number 311-8071, included in the Kit, on the 3/8 NPT Fitting of the High Pressure Water Tube Assembly. See Figure 9.
4. Place the Belleville Washer, Part Number 114-1058, included in the Kit, on the 1/8 NPT fitting of the High Pressure Water Tube Assembly with the convex side toward the 1/8 NPT Fitting. See Figure 9.
5. Place the 1/8 NPT Fitting of the High Pressure Water Tube Assembly through the hole in the Cool-San Cleaning System Module Plug Mounting Bracket. See Figure 9.
6. Install and tighten the Shut Off Plug on the 1/8 NPT Fitting of the High Pressure Water Tube Assembly. See Figure 9.
7. Connect the Shut Off Socket to the Shut Off Plug. See Figure 9.

NOTE

If the Cooling Coil is equipped with a Flared Connector, install the Female Connector Part Number 311-8109, included with this Kit, between the Coil and the replacement Tube Assembly. See Figure 7a.

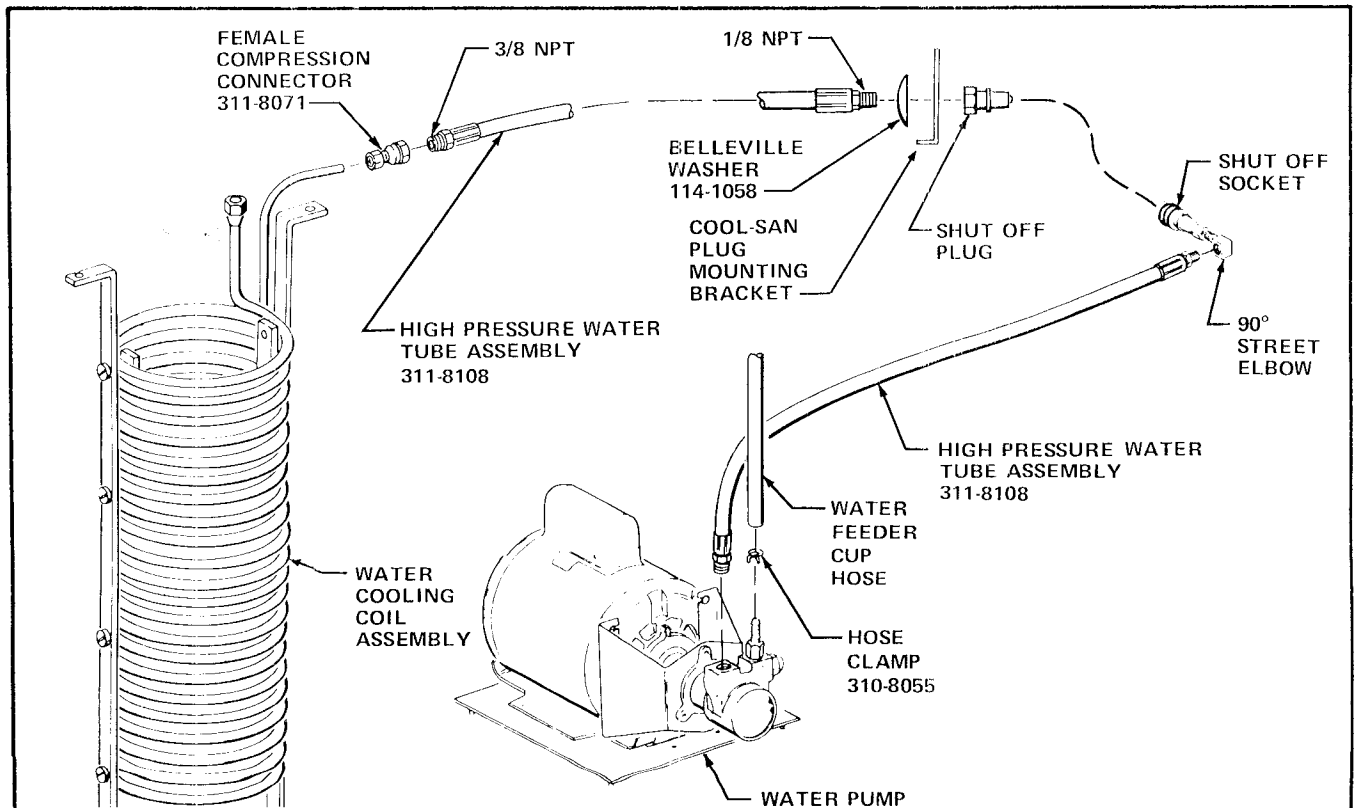


FIGURE 9

8. Install the Female Compression Fitting end of the High Pressure Water Tube Assembly over the end of the Water Cooling Coil. Tighten the Compression Nut finger tight and then turn and additional 1 1/2 turns, using two wrenches. See Figure 9.
 9. Install the Water Feeder Cup Hose and Hose Clamp, Part Number 310-8055, included in the Kit, on the Hose Connector at the Inlet Port of the Water Pump. See Figure 9.
 10. Install the Water Bath Cover on the Water Bath. See Figure 2.
 11. On Merchandisers equipped to vend Tea, install the Tea Dispenser Outlet Spout. See Figure 3.
 12. Install the Cup Compartment and Chute Assembly. See Figure 2.
 13. Install the CO₂ Cylinder.
 14. Install the Water Filter.
 15. Go to Section III, Checks and Adjustments.
- C. To install the Cool-San® Cleaning System Module to Water High Pressure Water Pump Tube Assembly.
1. Install the Shut Off Socket and 90 degree Street Elbow, on the 1/8 NPT Fitting of the High Pressure Water Tube Assembly, Part Number 311-8108, included in the Kit. See Figure 10.
 2. Install the 3/8 NPT Fitting of the High Pressure Water Tube Assembly in the Outlet Port of the Water Pump. See Figure 10.
 3. Connect the Shut Off Socket to the Normal Vend Shut Off Plug on the Cool San Cleaning System Module Plug Mounting Bracket. See Figure 10.
 4. Install the Water Feeder Cup Hose and Hose Clamp, Part Number 310-8055, included in the Kit, on the Hose Connector at the Inlet Port of the Water Pump. See Figure 10.
 5. Install the Water Bath Cover on the Water Bath. See Figure 2.
 6. On Merchandisers equipped to vend Tea, install the Tea Dispenser Outlet Spout. See Figure 3.
 7. Install the Cup Compartment and Chute Assembly. See Figure 2.
 8. Install the CO₂ Cylinder.

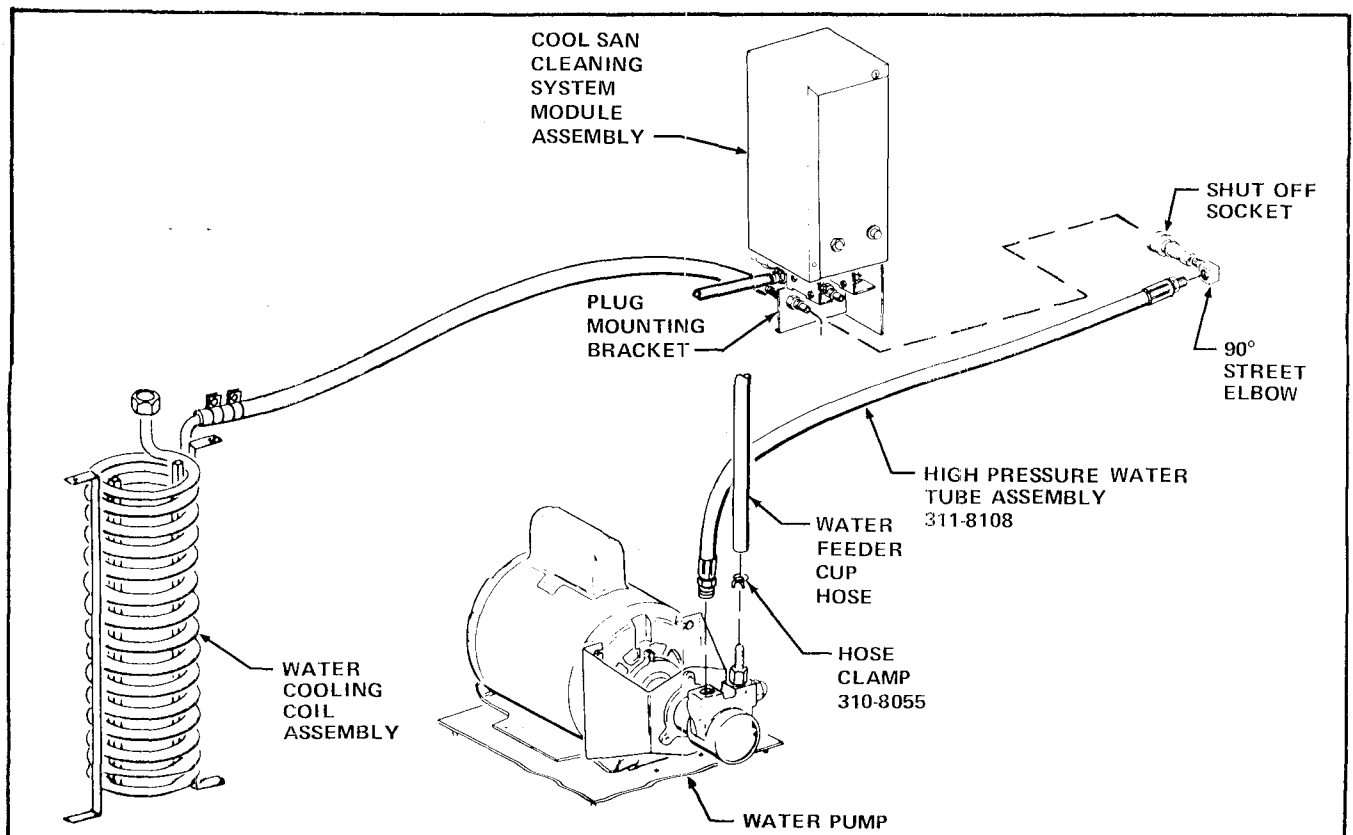


FIGURE 10

9. Install the Water Filter.

NOTE

10. Go to Section III, Checks and Adjustments.

If it is necessary to loosen or separate any fittings, remove the existing pipe thread tape and retape the fitting threads.

III. CHECK AND ADJUSTMENTS

- A. Move the Main Switch to the ON position. See Figure 1.
- B. Depress the TEST VEND Switch. See Figure 1.
- C. Depress a Selection Button.

- D. Check for and tighten any leaking connections in the water lines.
- E. Close and lock the Merchandiser Door.
- F. Test vend the Merchandiser.