



IMI CORNELIUS INC ■ One Cornelius Place ■ Anoka, MN 55303-6234

Telephone (800) 238-3600

Facsimile (612) 422-3246

INSTALLATION INSTRUCTIONS

INSTRUCTIONS FOR INSTALLING REFRIGERATION COMPRESSOR KIT (P/N 0808) ON SPIRIT DISPENSER WITH EXPANSION VALVE CONTROLLED REFRIGERATION SYSTEM

These instructions outline installation instructions for installing the Compressor Kit (P/N 0808) on Spirit Dispensers with expansion valve controlled refrigeration systems. Installation of the compressor kit converts the expansion valve controlled refrigeration system to a capillary tube restriction controlled refrigeration system. Retain these instructions as part of your equipment manual.

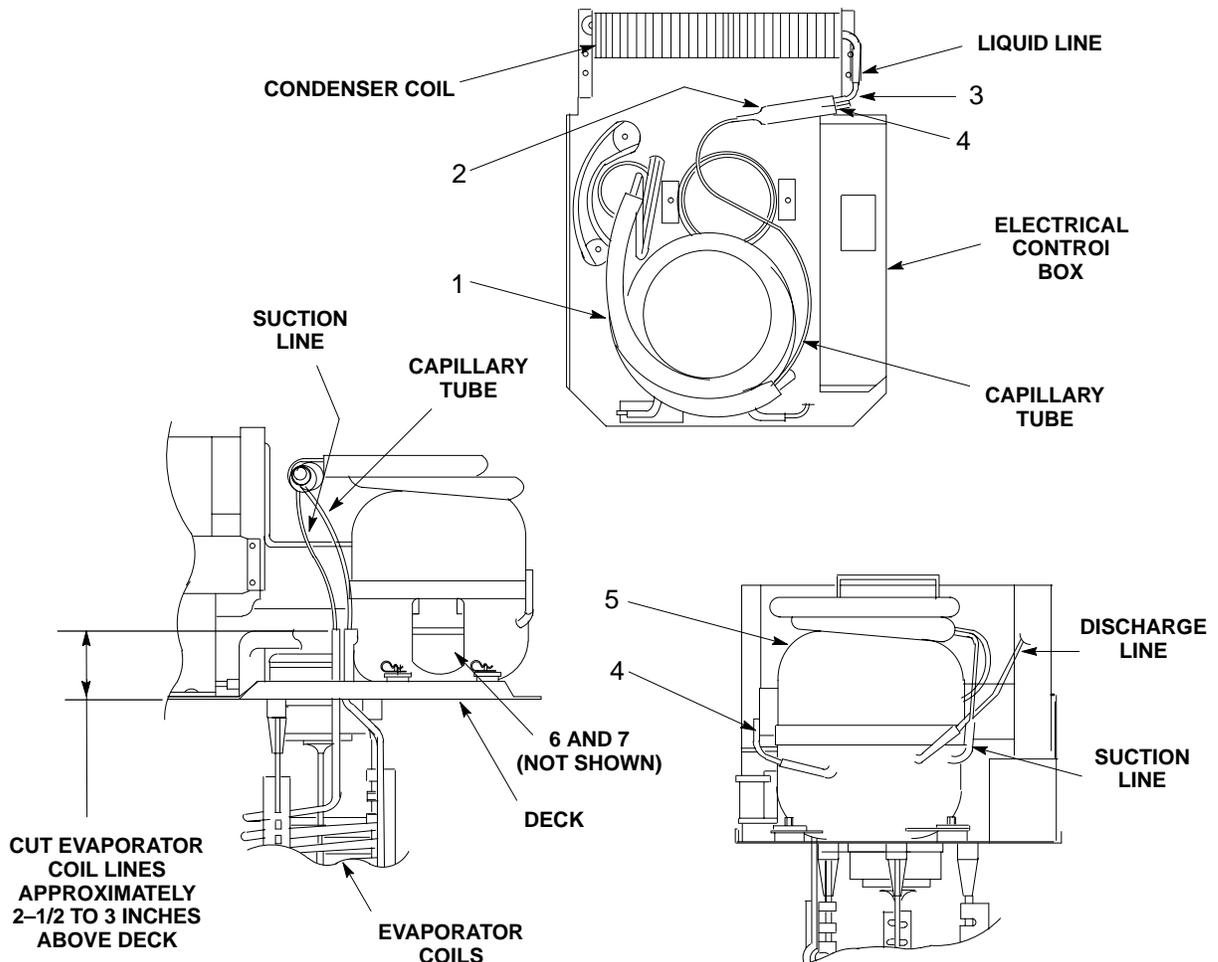


FIGURE 1. PARTS IDENTIFICATION (SOME PARTS NOT SHOWN FOR CLARITY)

NOTE: Only qualified personnel should install this kit. Make sure all parts are present and in good condition.

Table 1. Loose-Shipped Parts			
Item No.	Part No.	Name	Qty.
1	317604000	Suction Line Assembly	
2	189453000	Dual Inlet Strainer Drier	
3	187917000	Elbow Fitting	
4	188585000	Process Line	
5	309821000	Compressor	
6	309821011	Relay	
7	309821013	Overload Protector	
8	960135	Insulation Tape, 1/2 in. by 2-1/2/ in. by 2 ft. long	
9	0806	Decal, Refrigeration Charge	



WARNING: To prevent personal injury from possible electrical shock, disconnect electrical power source from Dispenser before proceeding to install the Refrigeration Compressor Kit.

1. Unplug Dispenser power cord from electrical outlet.
2. Remove Dispenser hood by removing one screw on top of hood, then lift hood straight up off Dispenser.
3. Refer to manual provided with the Dispenser and remove drop-in refrigeration assembly from Dispenser as instructed.
4. Refer to manual provided with Dispenser and inspect and if necessary, clean water tank as instructed.
5. Tag electrical wires for identification, then disconnect electrical wires from compressor terminals.
6. Remove tar tape from around evaporator coils refrigeration tubes coming up through hole in drop in refrigeration assembly deck. Remove tar tape up approximately 6 inches from deck.
7. Cut wire tie securing insulation surrounding the expansion valve control bulb and its holder located the evaporator coils.
8. Loosen two screws securing the control bulb holder to the evaporator coils, then remove holder.



WARNING: DO NOT break suction and discharge lines and allow refrigerant gas (freon) to escape to atmosphere. Allowing refrigerant gas to escape to atmosphere is illegal and will damage the earths ozone layer.

9. Using refrigerant gas reclaiming system, evacuate all refrigerant gas (freon) from the refrigeration system.
10. Cut off evaporator coils refrigeration tubes approximately 2-1/2 to 3 inches above drop-in refrigeration assembly deck as shown in Figure 1.
11. Apply heat shield where necessary to protect against burning electrical wiring or components, then unsolder suction and discharge refrigeration lines from the compressor.
12. Apply heat shield where necessary, then unsolder suction line from condenser coil liquid line.
13. Remove and retain permagum sealant from around evaporator coil tubes coming up through hole in refrigeration assembly deck.

14. Pull old suction line assembly with expansion valve up and out and at the same time, pulling its control bulb up through hole in deck. Discard old suction line assembly with expansion valve.
15. Remove compressor mounting clips, then remove old compressor from drop-in refrigeration assembly.

NOTE: If the compressor is within warranty period, contact IMI Cornelius Inc., Service Department, One Cornelius Place, Anoka, Minnesota 55303-1592 Phone (612) 421-6120 for compressor return shipment instructions.

INSTALLING REFRIGERATION COMPRESSOR KIT

1. Place new compressor (item 5) in place on drop-in refrigeration assembly deck. Secure compressor to deck with clips.
2. Remove bale strap and terminal cover from compressor.
3. Install RELAY (item 6) and OVERLOAD PROTECTOR (item 7) on compressor.
4. Connect black wire from overload protector to relays shown in Figure 2.
5. Connect all other electrical wiring, disconnected from old compressor, to new compressor as shown in Figure 2.
6. Install terminal cover on compressor and secure with bale strap.
7. Clean all lines to be soldered with emery cloth or wire brush until lines are “shiny”. Do not allow chips or sand from emery cloth to enter tubes. Do not allow water or moisture to enter system.
8. Place SUCTION LINE ASSEMBLY (item 1) coil in position over top of compressor as shown in Figure 1.
9. Connect suction line assembly suction line and capillary tube to evaporator coil lines as shown in Figure 1.
10. Connect discharge and suction line assembly suction line to compressor suction and discharge lines as shown in Figure 1.
11. Insert PROCESS LINE (item 4) in compressor process line tube as shown in Figure 1.
12. Install ELBOW FITTING (item 3) on condenser coil as shown in Figure 1.



CAUTION: Dual inlet strainer drier must be installed in horizontal position to avoid premature compressor failure.

13. Install DUAL INLET STRAINER DRYER (item 2) on elbow fitting as shown in Figure 1.
14. Insert PROCESS LINE (item 4) in dual Inlet strainer dryer as shown in Figure 1.

NOTE – Drier must not be uncapped more than 10 minutes before brazing into system.

15. Insert suction line assembly capillary tube in dual inlet strainer dryer as shown in Figure 1. CAPILLARY TUBE TO BE INSERTED NO MORE THAN 3/8 INCH INSIDE DRYER.
16. Connect “dry” nitrogen (–75F deponent minimum) to suction process line and open discharge process line to purge system. DO NOT PURGE WITH CO₂ GAS .
17. Purge system at least 10 minutes with dry nitrogen prior to brazing.
18. Adjust nitrogen flow until a very small amount (less than 1-psi) of nitrogen is flowing through refrigeration system.
19. While nitrogen is slowly flowing through refrigeration system, braze all but the last joint.
20. Disconnect dry nitrogen from refrigeration system, then braze last joint.

21. Clean all flux from brazed joints with cold water.
22. Refer to manual provided with Dispenser and install drop-in refrigeration assembly in Dispenser as instructed. If water tank was drained, fill with water as instructed in manual.
23. Pressurize refrigeration system to saturation with clean dry R-12 refrigerant.
24. Leak-check entire system. If joint is suspected, but cannot be pinpointed, tape envelope made of poly or heavy paper over joint to isolate. Wait 10 minutes then check air inside envelope for refrigerant.
25. Reclaim refrigerant and evacuate refrigeration system. If high-vacuum pump is used, evacuate to at least 200-microns (preferably 100-microns) prior to charging.
26. Charge refrigeration system with 5.5 ounces of clean dry R-12 refrigerant through the suction process line. It should not be necessary to operate system to install correct charge in liquid form.
27. When charging is complete, start and operate system for short period of time to check for proper operation.
28. Pinch Off. Use crimp tool and pinch process line tube twice, leaving crimp tool applied to second (inner) pinch until weld is cold. Cut tube approximately 1/2 inch from outer pinch. Open end of tube and fill with copper brazing alloy. Repeat for other process line. Do not use line-tapping valves or poppet type valves for system processing. They cause too much restriction for evacuation and have great potential for refrigerant leaks, causing malfunction and additional calls, and *voids warranty*.
29. Wrap exposed suction line with INSULATION TAPE (item 8) from foam insulation on suction line to compressor and top of refrigeration deck.
30. Reinstall permagum sealant around evaporator coil tubes coming up through hole in refrigeration assembly deck. Make sure hole is completely sealed.
31. Wipe clean an area next to model number identification nameplate. Remove paper backing from DECAL, REFRIGERATION CHARGE (item 9) and apply in cleaned area next to nameplate.
32. Install hood on dispenser and secure with screw.
33. Connect electrical power to Dispenser.
34. Check Dispenser for proper operation.

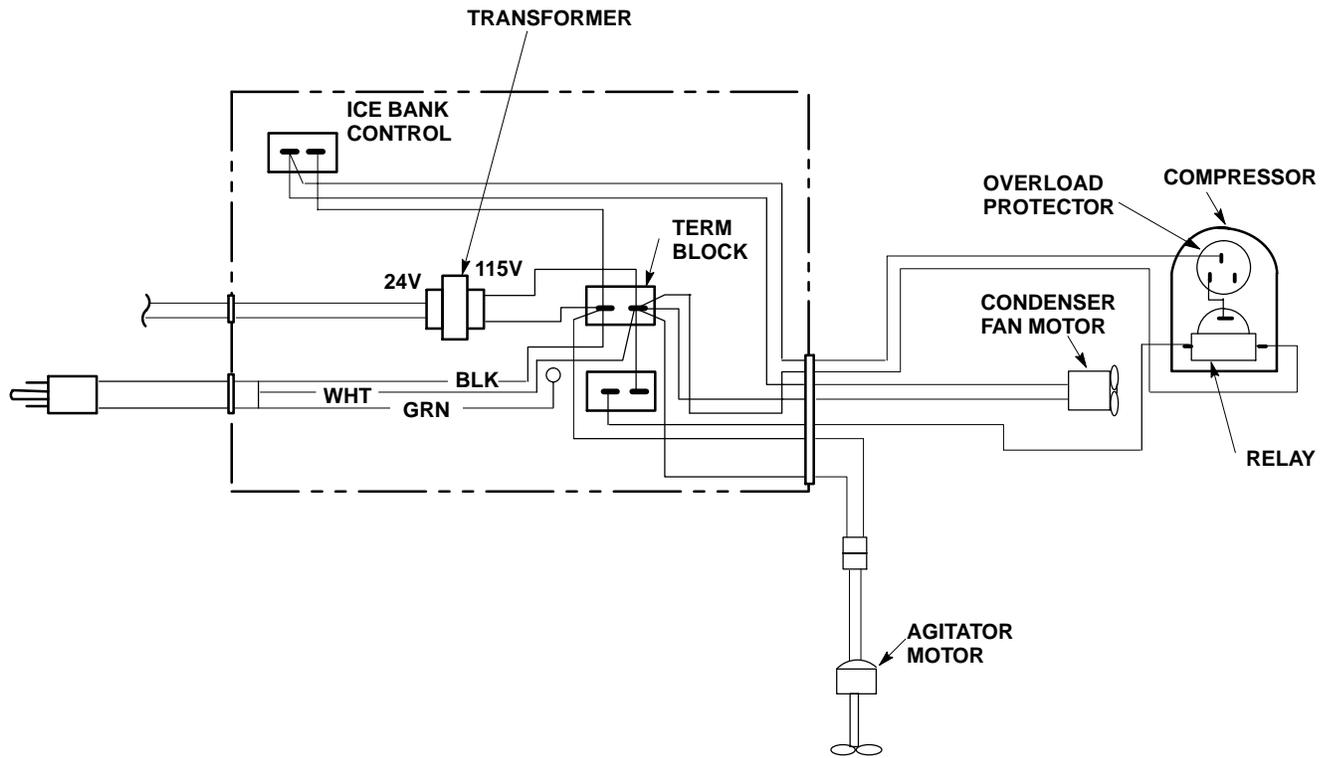


FIGURE 2. WIRING DIAGRAM