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CONVERTING ELECTRICALLY DEFROSTED FREEZERS TO HOT GAS DEFROSTED FREEZERS

(Refer to Freezer Component Location Drawing)

1. Pump compressor down and disconnect electric power to freezer.
2. Remove left end coil cover (1) and right end coil cover (4). Remove center coil cover (3).
3. Remove fan housing (12). This step optional, but conversion is considerably easier if it is removed because of the additional working room.
4. Remove TEK screws (14) from top edge of coil mounting brackets (15).
5. Disconnect the thermostats from return bends of right end of evaporator coil (9).
6. Disconnect liquid line and suction line from coil at left end of coil.
7. Lift coil out of freezer, or lift it up as high as possible and install a freezer shelf or shelves below it to keep coil suspended out of the way.
8. Disconnect leads to electric defrost heater (NOT SHOWN) in junction box at right front inside of freezer. Remove electric defrost pan and heater.
9. Rework coil. Replace 9" coil end baffles (16) now on coil with 8" baffles supplied. Replace 9" rear coil brackets (15) now on coil with 8" brackets supplied, being sure that the notched end is down.
10. Replace existing distributor (18) with new bypass distributor supplied. If the existing distributor has a bypass stub (17) it is not necessary to replace the distributor. Rather, just cut the end from the stub and install a flare nut (19) and check valve (7) on the stub.
11. Rework liquid line and suction line to heat exchanger (8) as shown.
12. Install hot gas serpentine (13) on floor pan. Start first pass 3 1/2" on center from back edge of freezer floor pan.
13. Hold the hot gas serpentine piping with 1/2" copper tube straps (21) spaced approximately 18" apart. Solder both tabs of strap to floor pan being careful not to solder serpentine tubing to the strap or to the floor pan. (Serpentine must be able to move within the strap because of expansion and contraction due to the heating and cooling).
14. Reinstall freezer coil so that rear coil brackets and galvanized end baffles rest on the bottom of freezer. Secure in place by replacing TEK screws through top edge of rear coil brackets. (Rear pass of hot gas serpentine will be located within the notch at bottom of rear coil brackets).
15. Connect serpentine hot gas tubing to coil as indicated.
16. Check entire system for leaks. Correct any that exist.
17. Reinstall fan housing if it has been removed.
18. Relocate thermostats on return bends of right end coil.

19. Install new center coil cover and new end coil covers. (Note that new coil covers are 1" lower than those that were removed).
20. Install drain access cover (2) in center coil cover.
21. Normally closed contactor (in ballast box) must be removed if one was used in the operation of the electrically defrosted unit. Installer must make provision for shutting off of lights and fans during defrost cycle. (For example: with installation of a normally closed contactor).

COMPONENTS INCLUDED IN HOT GAS CONVERSION KIT

1. One left coil cover (1).
2. One drain access cover (2).
3. One center coil cover (3).
4. One right coil cover (4).
5. Two check valves (7).
 - 3/8" check valves for models: RI-2-DFR; RI-2-DFR-KT; and RI-3-DFR-KT
 - 1/2" check valves for models: RI-4-DFR; RI-5-DFR; RI-3-DFR-KT; RI-4-DFR-KT and RI-5-DFR-KT
6. One serpentine coil copper tubing (13).
7. Rear coil mounting brackets (15).
 - Two brackets: Model RI-2-DFR
 - Three brackets: Models RI-3-DFR, RI-4-DFR, RI-2-DFR-KT and RI-3-DFR-KT
8. Two coil end baffles (16).
9. Four flare nuts (19).
 - Flare nuts to match check valve sizes on all freezers.
 - Model RI-3-DFR-KT = one 7/8" X 7/8" X 1/2" tee, one 1/2" X 3/8" X 1/2" tee, and one 1/2" X 1/2" X 1/2" tee.
 - Model RI-4-DFR-KT = 1 1/8" X 1 1/8" X 1/2" tee, one 1/2" X 3/8" X 1/2" tee, and one 1/2" X 1/2" X 1/2" tee.
 - Model RI-5-DFR-KT = one 1 1/8" X 1 1/8" X 1/2" tee, one 1/2" X 3/8" X 1/2" tee, and one 1/2" X 1/2" X 1/2" tee.
10. Three tees (20).
 - Model RI-2-DFR = one 7/8" X 7/8" X 1/2" tee, two 3/8" X 3/8" X 3/8" tees.
 - Model RI-3-DFR = one 7/8" X 7/8" X 1/2" tee, two 3/8" X 3/8" tees.
 - Model RI-4-DFR = one 7/8" X 7/8" X 1/2" tee, one 1/2" X 3/8" X 1/2" tee, and one 1/2" X 1/2" X 1/2" tee.
 - Model RI-5-DFR = one 1 1/8" X 1 1/8" X 1/2" tee, one 1/2" X 3/8" X 1/2" tee, and one 1/2" X 1/2" X 1/2" tee.

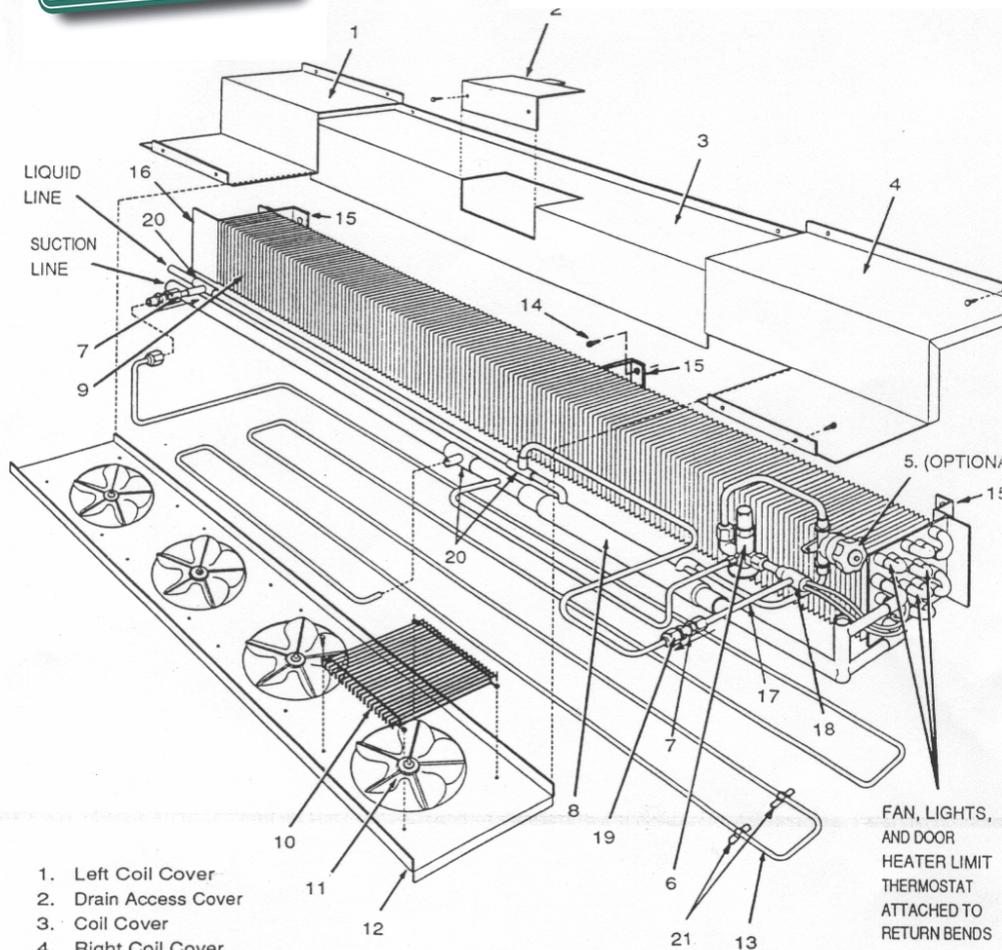
Model RI2-DFR-KT = one 7/8" X 7/8" X 1/2" tee, two 3/8" X 3/8" tees.

11. Copper tube straps (21):

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|----------------------------|-------------------------------|
| Model RI-2-DFR = 18 straps | Model RI-2-DFR-KT = 22 straps |
| Model RI-3-DFR = 24 straps | Model RI-3-DFR-KT = 30 straps |
| Model RI-4-DFR = 30 straps | Model RI-4-DFR-KT = 35 straps |
| Model RI-5-DFR = 35 straps | Model RI-5-DFR-KT = 44 straps |



Freezer Components



- 1. Left Coil Cover
- 2. Drain Access Cover
- 3. Coil Cover
- 4. Right Coil Cover
- 5. Hand Valve (Optional)
- 6. Expansion Valve
- 7. Check Valve (Hot Gas Defrost Only)
- 8. Heat Exchanger
- 9. Evaporator Coil
- 10. Fan Guard
- 11. Fan Blade - Fan Motor
- 12. Fan Housing
- 13. Serpentine Coil - Hot Gas Defrost (Heating Element (not shown) located under coil in case with electric defrost)

- 14. #8 x 1/2" TEK screws
- 15. Rear Coil Mounting bracket
- 16. Coil end baffles
- 17. Distributer Bypass Stud
- 18. Distributer
- 19. Flare nuts
- 20. Tees
- 21. Copper tube straps

FAN, LIGHTS, AND DOOR HEATER LIMIT THERMOSTAT ATTACHED TO RETURN BENDS