

Article# 9247 : Refrigerator: Cap Tube Replacement / Heat Exchanger Replacement

Cap Tube Replacement
(see below)
French Door, Bottom Mount, Side-by-Side
Single/Dual Evaporator

Heat Exchanger Replacement
([click here](#) or scroll down)
French Door, Bottom Mount, Side-by-Side
Single Evaporator

NOTE: If a restriction has been determined to be the cause of the sealed system issue in a single evaporator system, the preferred method of repair is described in LGtechassist article 8464.

After following the procedure in article 8464 to remove the restriction, then the cap tube or the Heat Exchanger must be replaced.

Technician may choose which method to use.

Cap Tube Replacement
French Door, Bottom Mount, Side-by-Side
Single/Dual Evaporator

First method shown below is Replacement of Cap Tube. Since units vary, instructions will be general in nature and are intended for experienced service technicians.

Instructions start at the repair point where refrigerant has been removed and the system is open.

Gain access to the evaporator and the machine compartment

Capillary Tube: Part number MGE63775901

Step 1:
Remove cap tube from packaging.

Straighten out the cap tube, and bend a small hook at the end of the capillary tube.
(The hook will allow the tube to push through the drain line easier.)

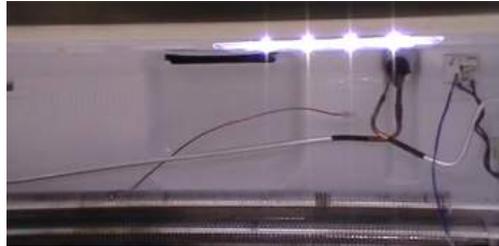
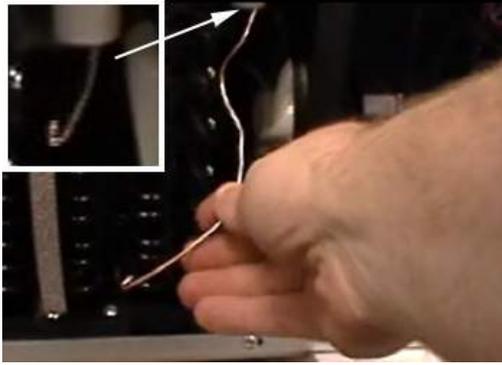


Step 2: Insert the cap tube into the drain hole below the evap coil.

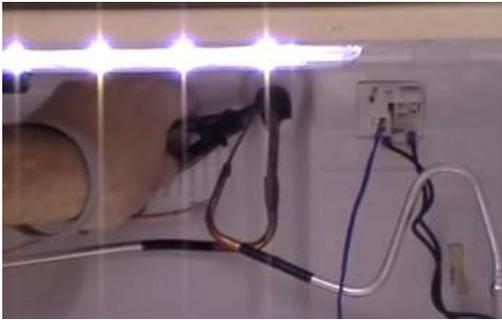
Note: Sometimes it is easier to push the cap tube through the drain from the machine room up to the evap coil. Try both ways to see which is easiest. Drain tube routing can change depending on model.



Step 3: Pull the capillary tube through the drain line in the machine room.
Leave enough cap tube in the freezer section to make the connection to the evaporator.



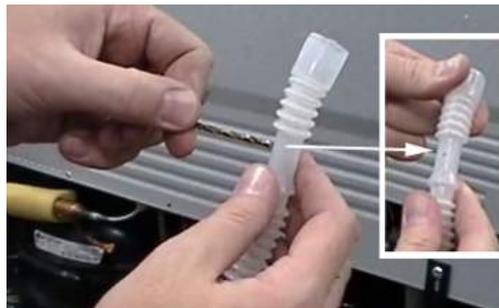
Step 4: remove the original capillary tube from the evaporator and connect the new capillary tube using Lokring or torch.



Step 5: In the machine room cut the zip tie that holds the original cap tube to the suction line.
Cut the original cap tube as close to the cabinet as possible.



Step 6: Use a small drill bit to make a hole in the drain tube.
The hole must be big enough that the cap tube can be pushed through the drain tube.



Step 7: Feed the cap tube through the hole just drilled in the drain tube.
Re-install the drain tube into the original position.

Note: To hold the cap tube in placed, route through the condenser foam or condenser fan shroud (depending on the model).



Step 8: Wind the capillary tube around the suction line to create heat exchange.

Make the first loop as close to the cabinet as possible; all loops need to be as close together as possible (see pictures below).

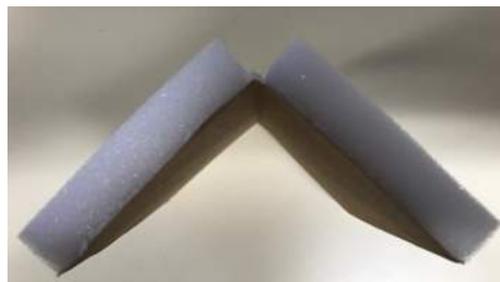
WARNING:

Failure to begin the wrap as close to the cabinet as possible and as tight as possible could result in condensation and / or frost. This could lead to a water damage claim.



Step 9: After the new cap tube is connected to the evaporator and the suction line is wrapped, pressurize the system with nitrogen to ensure good flow before installing the cap tube into the new drier.

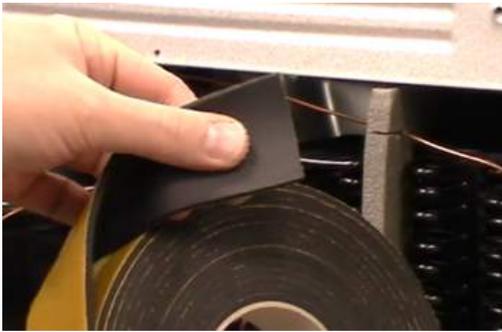
There is a piece of foam in the bag to be used anywhere it may be needed to prevent vibrations or rub points.



Step 10: Place silicone on the hole previously drilled in the drain tube to prevent the possibility of water dripping on the floor.



Cover the suction line from the cabinet to the compressor with insulation.



Now that the new capillary tube has been routed through the drain, finish the sealed system repair.

- Use nitrogen to leak check the joints after connections have been made.
- Pull a minimum 500 micron vacuum and make sure it holds below 1000 microns. Remember if the micron gauge shows a rise above 1000 microns when the pump is isolated, moisture is still in the system. A rise above 2000 microns indicates a leak.
- Once vacuum holds below 1000 microns the system is ready to be charged to the amount of refrigerant that is printed on the model/serial tag inside the refrigerator.

Heat Exchanger Replacement

French Door, Bottom Mount, Side-by-Side

Single Evaporator

If a restriction has been determined to be the cause of the sealed system issue in a single evaporator system, the preferred method of repair is described in LGtechassist article 8464.

After following the procedure in article 8464 to remove the restriction, then the cap tube or the Heat Exchanger must be replaced.

Technician may choose which method to use.

The following instructions guide through the heat exchanger replacement. (Part number AGR75874401)

Since units vary, instructions will be general in nature and are intended for experienced service technicians.

Instructions start at the repair point where refrigerant has been removed and the system is open.

Gain access to the evaporator and the machine compartment

Symptoms:

- 1) Restriction in cap tube that cannot be blown out.
- 2) Leaking Cap tube / Leaking suction line.

Single evaporator French Door, Side-by-Side and Bottom Mount only

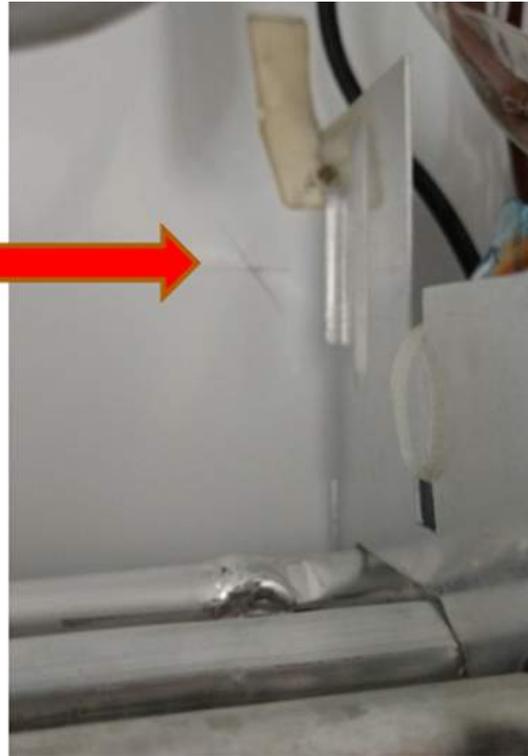
Step 1: Locate the insulation patch above the machine room on the left side and remove.



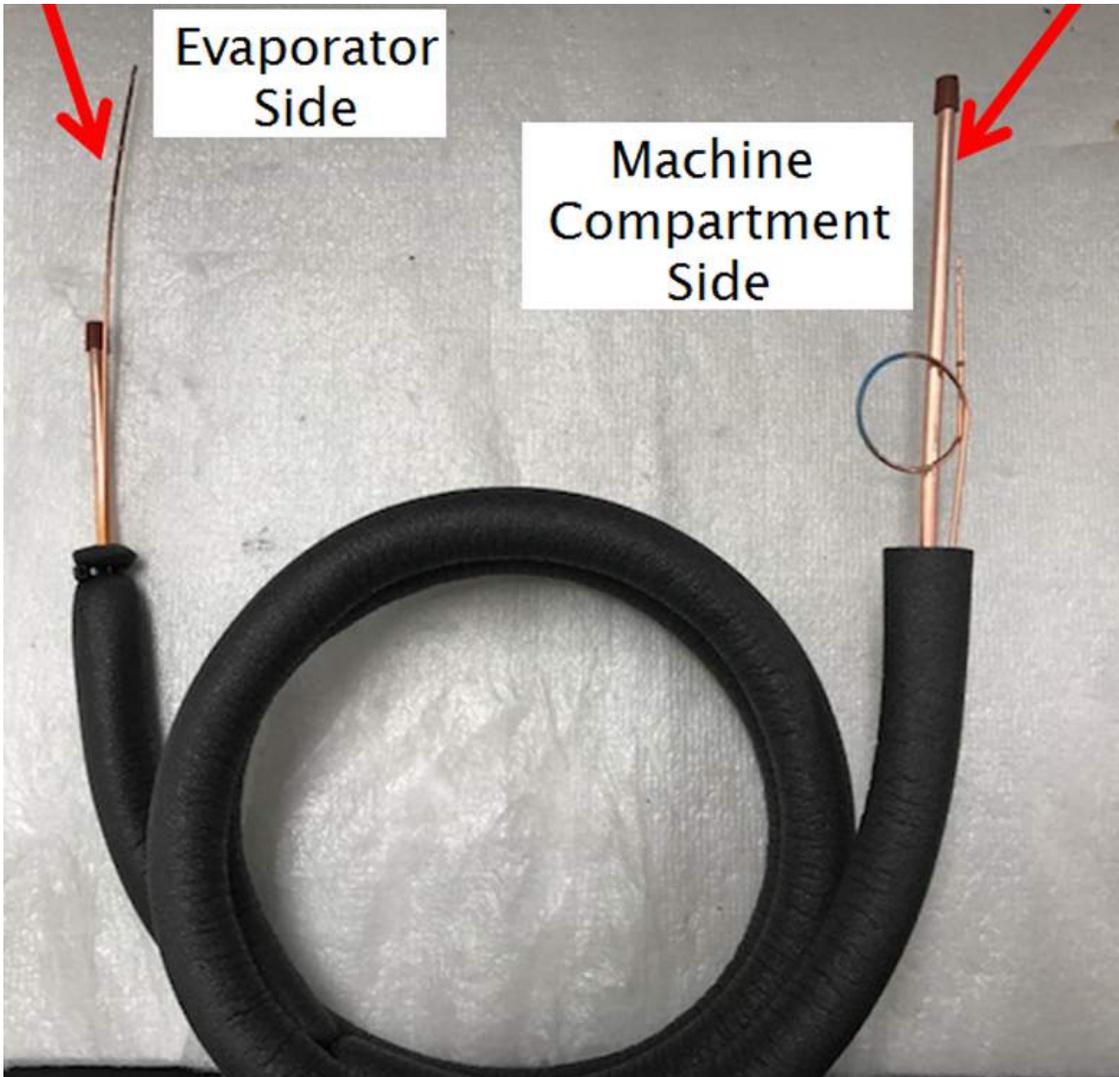
Step 2: Insert a #3 screwdriver with 7-8 inch shaft into foam at an extreme sharp angle as shown below until contact is felt with the plastic liner inside:



Step 3: Once contact is made with the inner liner, put mild pressure on the screwdriver. This will cause the plastic inside to bow and will allow technician to see where the new lines will be entering the freezer section. Then take a box cutter and make an incision; an x shaped incision works great and keeps the liner from cracking.



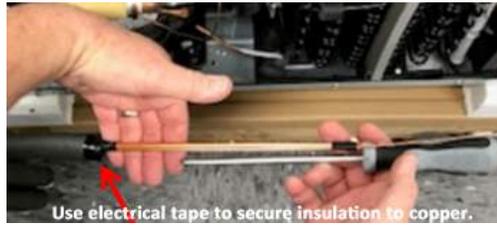
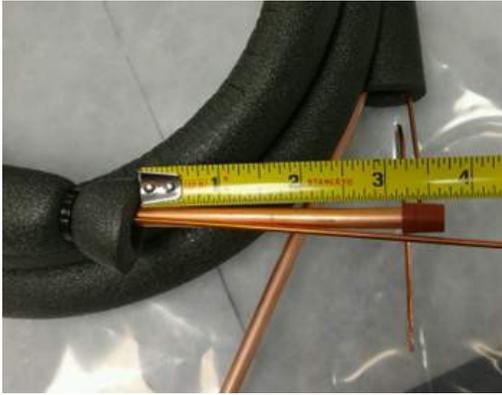
Step 4: Now push the screwdriver all the way through the plastic liner.



Step 5: Trim some of the insulation back on the end of the heat exchanger that will be fed through the cabinet to the freezer section.

The service part supplied will have around 3 ½ inches of exposed tubing to feed through the cabinet - which is not long enough to reach the evaporator.

Example: In the below refrigerator example, technician knew length needed was the length of the screwdriver plus about 4 inches to be able to connect to the evaporator. So insulation was cut like the photo below:



Use electrical tape to secure insulation to copper.
No exact measurement for how much insulation to be cut can be given because length will vary by model.

Step 6: Feed the new heat exchanger from the back to the inside of the freezer section.
(Wrapping the suction line and cap tube together tightly with electrical tape makes this process easier):



Step 7: Connect the new suction line and capillary tube to the existing evaporator coil. Either Lokring or soldering will work.



Step 8: Unroll the heat exchanger and route it along the back of the refrigerator like the picture below.
Now connect the new suction line and capillary tube to the compressor and drier. Either Lokring or soldering will work.

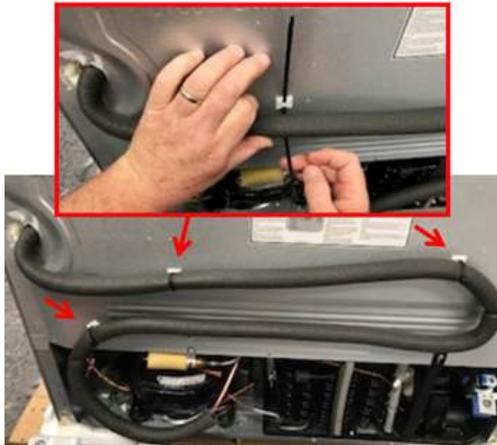


Step 9: Secure the heat exchanger to the back of the refrigerator.

Stick-on holders and zip ties can be used.
Three will hold the heat exchanger securely.

WARNING:

DO NOT over tighten the zip tie. Tighten down to the foam insulation only. Over tightening could produce condensation, frost, or ice which could cause water damage and liability issues.



Step 10: Seal with permagum where the heat exchanger enters the cabinet.
This will keep air from escaping and stop the tubing from sweating.



Step 11: Cut the rear grille to fit around where the heat exchanger enters the machine room as below.

When the cuts are made, there will likely be sharp edges.
 Either roll the sharp edges around or cover with aluminum tape.



Now that the new heat exchanger has been routed through the cabinet, finish the sealed system repair.

- Use nitrogen to leak check the joints after connections have been made.
- Pull a minimum 500 micron vacuum and make sure it holds below 1000 microns. Remember if the micron gauge shows a rise above 1000 microns when the pump is isolated, moisture is still in the system. A rise above 2000 microns indicates a leak.
- Once vacuum holds below 1000 microns the system is ready to be charged to the amount of refrigerant that is printed on the model/serial tag inside the refrigerator.