



# Replacement of Model 1200/1210 Cooling Unit

## IMPORTANT

The refrigerator cooling unit serial number may be found on the numeric label (ealier models) of the bar code label (late models) affixed to the solution chamber (see Figure 1).

### Removal of Refrigerator From Enclosure

1. Close the RV propane gas tank valve(s).
2. De-energize the refrigerator's 12 volt DC power at the RV DC power distribution panel.
3. Disconnect the AC power cord from the RV receptacle.
4. Disconnect the following wires from the power board:
  - a. 12 volt DC positive (+) wire from terminal 12VDC; the 12 volt DC negative (-) wire from terminal 12GND.
  - b. Spark/sense electrode wire from the high tension coil terminal.
  - c. Gas valve solenoid wires from terminal GV and terminal GV GND.



### WARNING

To avoid possible propane gas leaks, always use two wrenches to loosen and tighten the propane gas supply connections.

5. Disconnect the propane gas supply line from the gas valve.
6. Disconnect the flapper heater/sense power supply wires as follows:

#### A. Units with Power Board P/N619378

1. Disconnect the flapper heater power supply wires from the power board as follows:
  - a. White wire from terminal FLP/SENSE (+).
  - b. Black wire from terminal FLP/DC HTR (-).
2. Disconnect the door circuit connector from terminal P3, DOOR.

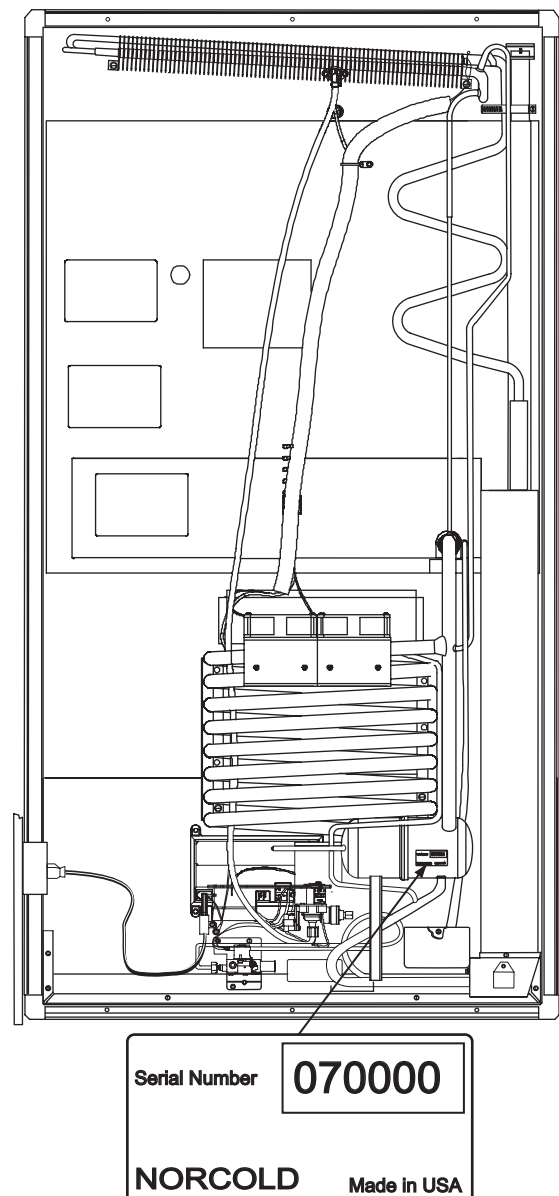


Figure 1.

## B. Units with Power Board P/N 621271

Disconnect the flapper heater power supply wires from the power board as follows:

- a. White wire from terminal FLP/DC\_HEAT (+)
- b. Black wire from terminal DC\_HT\_GND (-).

### On 1200LRIM/1210 IM (ice maker) unit only!

1. Close the RV water supply valve to the ice maker.
  2. Disconnect the water supply line.
  3. Disconnect the water valve solenoid wires.
  4. Remove the water valve/bracket assembly.
7. Remove the power board cover. The cover is fastened with three 1/4 inch hex head screws.
  8. Disconnect the AC heaters wires from the power board. The yellow wires are connected to terminals AC HT LO and AC HT LO\_2. The black wires are connected to terminals AC HT HI and AC HT HI\_2.
  9. Remove the drip cup. The drip cup has a 1/4 inch hex head screw.
  10. Remove the gas valve, burner tube, and burner as a complete assembly. The gas valve has three 1/4 inch hex screws and the burner has a Phillips head pan screw.
  11. Remove the spark/sense electrode. The spark/sense electrode has a Phillips head pan screw.
  12. Remove the burner box cover. The cover is fastened with a 1/4 inch hex head screw.
  13. Remove the burner box base. The burner box base has two 1/4 inch hex head screws.
  14. Remove the rear mounting flange screws. See Figure 2.

### On 1200LRIM/1210 IM (ice maker) unit only!

Remove ice maker bin from left side freezer.

15. Remove the cabinet's trim, then remove all lower and upper mounting bracket screws (three on the top bracket and three in the lower bracket). See Figure 3a.
16. Remove three plastic screw caps from the ledge of cabinet's bottom mounting bracket. Remove mounting screws if present. See Figure 3b.

### NOTE

Certain RV manufacturers drill the left and the right side breaker flange to install additional mounting screws. These screws may not be present.

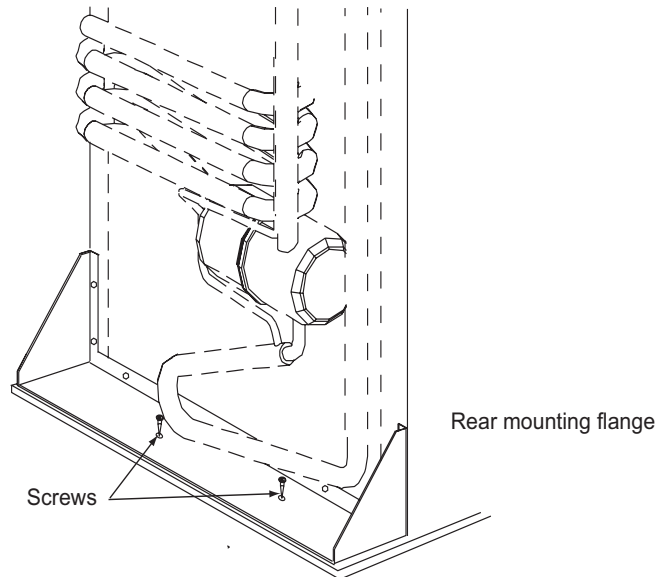


Figure 2.

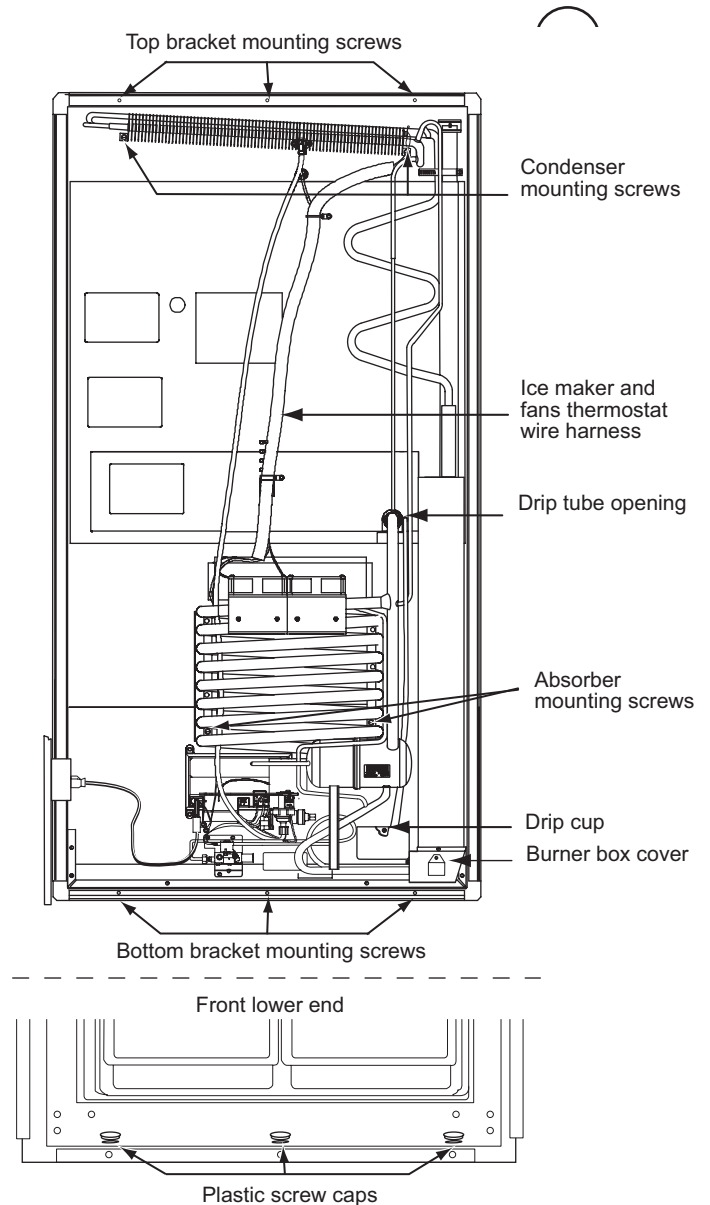


Figure 3.

- Check breaker for additional mounting screws. These screws may have been installed by the RV manufacturer. Remove any mounting screws present.

**! WARNING**

The refrigerator weighs approximately 220 pounds. A minimum of two people are required to remove the refrigerator from the enclosure. Attempting to remove the refrigerator without the assistance of at least one other able person may cause serious injuries and/or damage to the equipment and/or recreational vehicle.

- Remove the refrigerator from the enclosure.

### Removal of Existing Cooling Unit from Cabinet

**On 1200LRIM/1210 IM (ice maker) unit only!**

Disconnect the ice maker wire harness from the AC power cord as follows:

- White wire from AC cord ribbed black pigtail.
- White wire from AC cord smooth black pigtail.
- Ground wire from refrigerator cabinet.

- Remove the fans thermostatic switch from the first condenser fin.
- Remove both fans and bracket assemblies. Do not disconnect the fans from the wire harness.

**! CAUTION**

Plastic wire ties are used to bundle the ice maker and cooling fans wire harnesses. Exercise extreme care when removing wire ties. Do not cut either the ice maker or the cooling fans wire harness.

- Cut the lower cable tie holding the lower section of the wire harness to the foam plug. See Figure 4.
- Remove the upper cable tie screw to loosen the wire harness from the cooling unit foam plug. See Figure 4. Some models will have a cable tie that must be cut.
- Cut or peel off the sealing tape from all four edges of cooling unit foam plug. See Figure 4.
- Remove the left and the right freezer shelves.

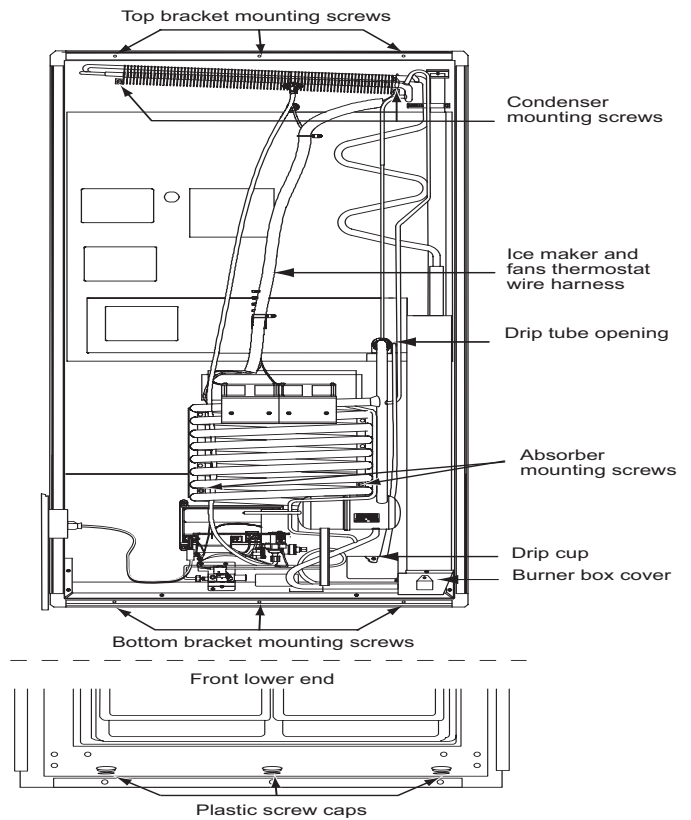


Figure 4.

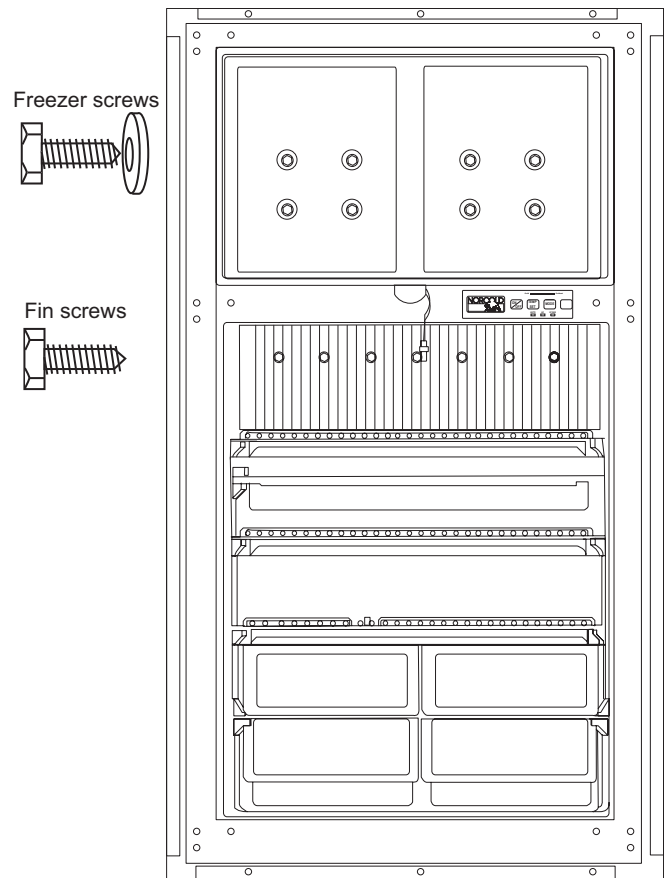
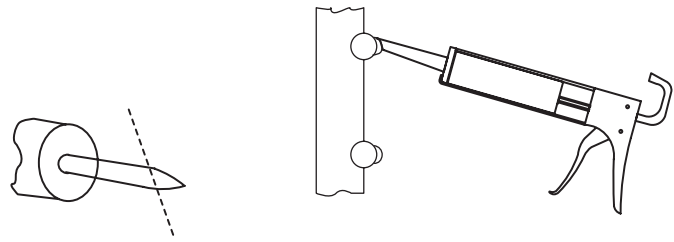


Figure 5.

7. Remove eight freezer plate screws (four screws along with flat washers per freezer compartment). See Figure 5.
8. Unclip thermistor from the fin assembly.
9. Remove all seven screws from the fin assembly. See Figure 5.

**Steps 10 and 11 refer back to Figure 3, page 2.**

10. Remove the absorber bracket mounting screws.
11. Remove the condenser mounting screws.
12. Remove the cooling unit from refrigerator cabinet. Make sure drain tube is not damaged during removal of cooling unit from cabinet.



Cut sealant tube tip as shown to dispense a 1/2 inch thick bead.

Apply a 1/2 inch bead of sealant along the center of the evaporator tube surface.

**Preparation of New Cooling Unit For Installation**

1. Clean the old sealant from the cabinet step area, fin assembly, and freezer plate.

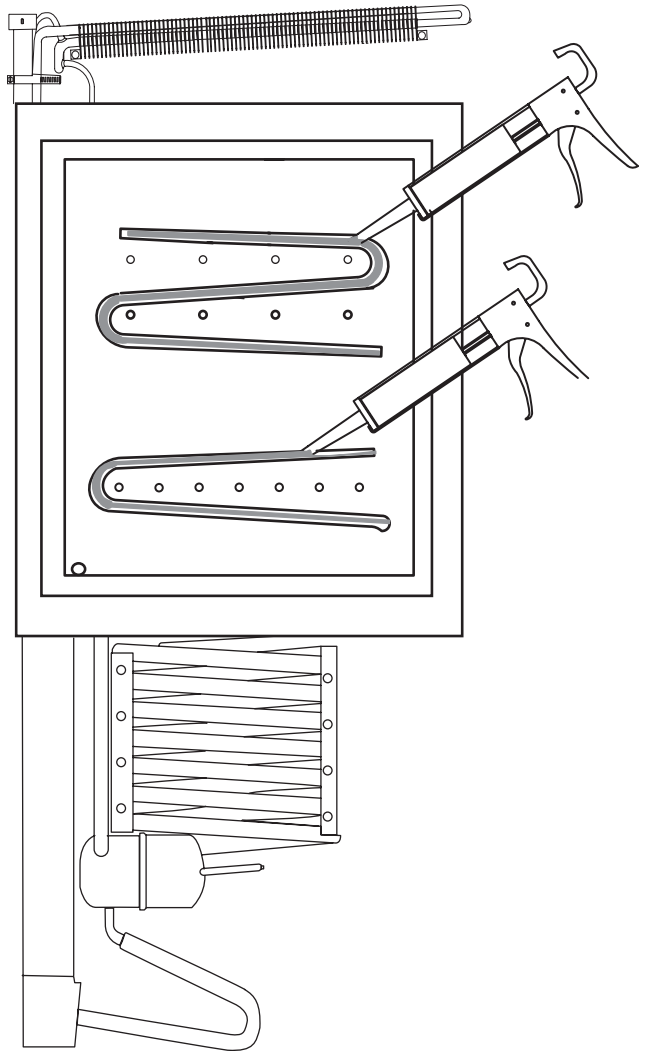
**NOTE**

Three tubes of sealant are included with the new cooling unit. The tip of each tube should be trimmed to dispense a bead 1/2 thick.

**IMPORTANT**

The sealant must be applied to the cooling unit as outlined in the following steps and shown by Figure 6 and Figure 7.

Failure to apply the sealant as outlined by this procedure will lead to poor cooling performance.



**Figure 6.**

2. Apply 1/2 inch bead of sealant to the cooling unit high evaporator tube and to the low evaporator tube. See Figure 6.
3. Apply 1/2 inch bead of sealant to the right, left, and bottom step areas of the cabinet.
4. Apply 3/4 inch wide bead of sealant to the around the upper side of the cabinet step. See Figure 7, page 5.

## Installation of New Cooling Unit.

1. Install the cooling unit in refrigerator cabinet:
  - a. Insert the drip tube through the foam block opening.
  - b. Clear or move any components or items that may interfere with the installation process.
  - c. Align the cooling unit foam plug step with the cabinet step.
2. Install the condenser mounting screws to retain the cooling unit in place. Make sure condenser is at a 3° angle from the horizontal, similar to the original system. For models with S/N or lower, use only the top mounting brackets to screw the condenser to the cabinet.

### On 1200LRIM/1210 IM (ice maker) unit only!

Use the two long screws to mount the ice maker bracket.

3. Install the eight freezer plate screws (four hex head screws along with flat washers per freezer compartment). Maximum screw tightening torque is 50 inch-pound.
4. Align, install, and tighten all seven fin assembly screws, then clip the thermistor to the fin assembly using the second fin from the right. Maximum screw tightening torque is 50 inch-pound
5. Install the left and the right freezer shelves.
6. Seal the drain tube penetration with perma gum.
7. Install the fans and bracket assemblies.
8. Install the fan thermostatic switch on the left-most condenser fin using the screw holes provided in the fin. Refer to the photo of fan thermostat (lower right).
9. Reinstall the upper cable tie and screw to hold the upper section of the wire harness to the cooling unit foam plug. For some models, use the stick-on tie included.
10. Reinstall the lower cable tie to hold the lower section of the wire harness to the foam plug.
11. Install and tighten the absorber brackets mounting screws.

### On 1200LRIM/1210 IM (ice maker) unit only!

Connect the ice maker wire harness as follows:

1. White wire to ac cord ribbed black pigtail.
2. Black wire to ac cord smooth black pigtail.

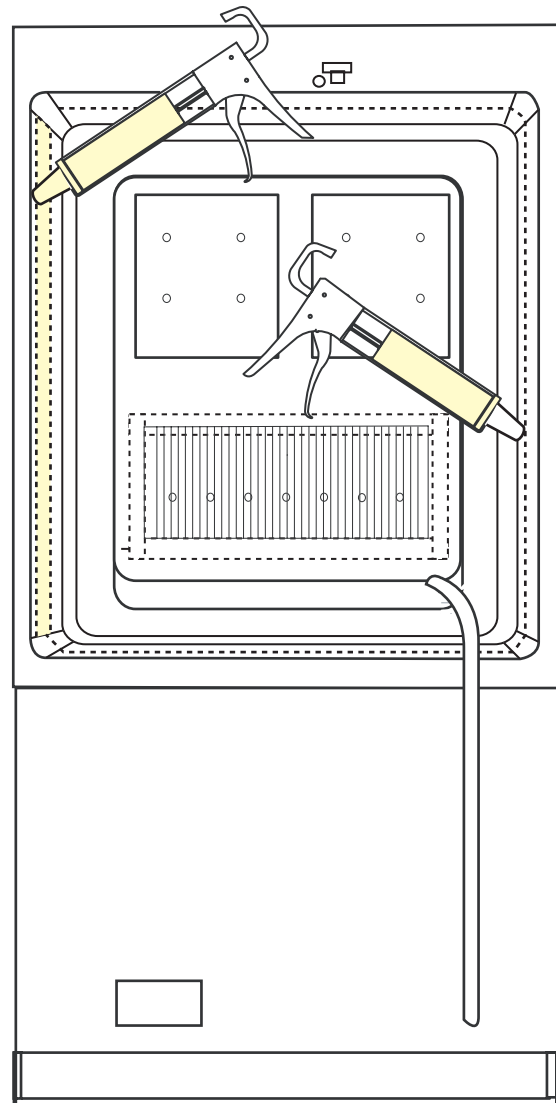


Figure 7.



12. Install the burner box base.
13. Install the gas valve, burner tube, and burner as an assembly.
14. Install the spark/sense electrode assembly, Set the electrode-to-burner air gap between 1/8 and 3/16 inch (maximum air gap).
15. Install the burner box cover.
16. Connect the AC heaters wires to the power board.  
The yellow wires connect to terminals AC HT LO and AC HT LO\_2. The black wires to terminals AC HT HI and AC HT HI\_2.
17. Install the power board cover.
18. Connect the flapper heater/sense power supply wires as follows:

**A. Units with Power Board P/N619378**

- 1). Connect the flapper heater power supply wires to the power board as follows:
  - a. White wire to terminal FLP/SENSE (+).
  - b. Black wire to terminal FLP/DC HTR (-).
- 2). Connect the door circuit connector to terminal P3, DOOR.

**B. Units with Power Board P/N 621271**

Connect the flapper heater power supply wires to the power board as follows:

- a. White wire to terminal FLP\_DC\_HEAT (+).
- b. Black wire to terminal DC\_HEAT\_GND (-).

19. Connect the gas valve solenoid wire to the power board terminals GV and GV GND
20. Connect the spark/sense electrode wire to the high tension coil terminal.
21. Use sealant to seal the gap between the drip hose and the foam plug.
22. Connect the AC cord plug to the power board.

**On 1200LRIM/1210 IM (ice maker) unit only!**

1. Install the water valve/bracket assembly.
2. Connect the AC power supply wires to the ice maker water valve solenoid.
3. Connect the green (ground) wire to the refrigerator cabinet.

**Reinstallation of Refrigerator in the Enclosure**



**WARNING**

The refrigerator weighs approximately 220 pounds. A minimum of two persons are required to install the refrigerator into the enclosure. Attempting to install the refrigerator without the assistance of at least one other able person may cause serious injuries and/or damage to the equipment and/or recreational vehicle.

1. Install the refrigerator in the enclosure.
2. Secure the refrigerator breaker to the enclosure using the upper and lower mounting bracket screws removed previously.
3. Install the side brackets trim piece.
4. Install the upper and lower trim piece.
5. Secure the refrigerator to the enclosure floor using the rear mounting flange screws removed previously.
6. Install the drip cup using the 1/4 inch hex head screw removed previously.

**On 1200LRIM/1210 IM (ice maker) unit only!**

1. Connect the water supply line to the water valve.
2. Open the RV water supply valve to the ice maker.
3. Check for water leaks at water valve connection.



**WARNING**

The AC ground wire and ice maker ground wire share the same connection. Make sure the AC cord ground wire is reconnected when connecting the ice maker ground wire.



**WARNING**

To avoid possible propane gas leaks, always use two wrenches to loosen and tighten the propane gas supply connections.



### WARNING

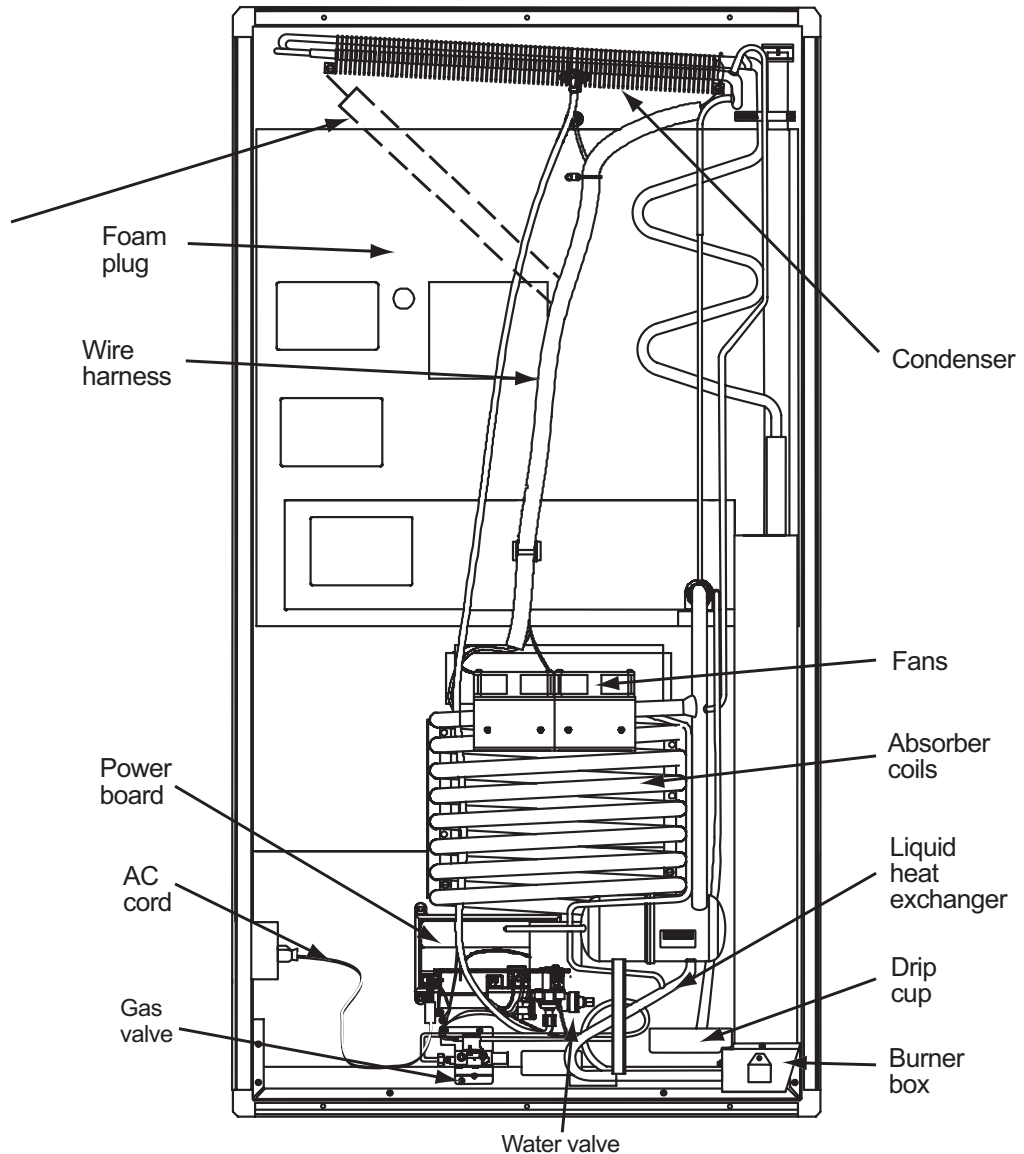
Use a commercial leak testing solution. Carefully, apply the leak test solution to prevent wetting electrical connections. Fix all existing leaks and recheck for propane gas leaks before continuing with the procedure.

7. Connect the RV LP gas supply line to the gas valve and tighten fitting.
8. Open the LP gas tank valve(s) and test LP gas connection at gas valve for leaks.
9. The replacement cooling system comes equipped with a thermal switch that monitors cooling system temperatures.
  - On cooling units made before March 3, 2006 (serial numbers lower than 8981139), connect the temperature switch (142) as shown below (see Art01852).

- On cooling units made after March 3, 2006 (serial numbers higher than 8981138), replace the two wires that are attached to the temperature switch (142) with the two replacement wires (supplied). Put the 90° connectors of the replacement wires onto the LIMIT\_IN and LIMIT\_OUT terminals of the power board as shown below (see Art01853).
10. Plug the AC power cord into the RV receptacle.
  11. Energize the refrigerator's 12 volt dc power at the RV dc distribution panel.
  12. Switch ON the refrigerator from optical control assembly and select LP manual mode operation.
  13. Leak test all propane gas fittings, including the propane gas supply connection at the gas valve.
  14. Test refrigerator control function on all operating modes.
  15. Follow the shipping instructions packaged with the Product Safety Recall documentation to package and ship the cooling unit to NORCOLD.

## Replacing the Cooling Unit

For models with S/N or higher, fan thermostat mounts to the left-most fin.



**NORCOLD, Inc.**  
P. O. Box 4248  
Sidney, OH 45365-4248

**NORCOLD CUSTOMER SERVICE**  
Telephone:..... 1-800-877-0488  
Fax:..... 937-497-3183  
Web Site: ..... [www.norcold.com](http://www.norcold.com)