



KIT PART NUMBER 4534040
INSTRUCTIONS FOR REWORKING A POLYVEND PV500

CHECK THE PARTS RECEIVED IN THE KIT WITH THE PARTS LIST IN THESE INSTRUCTIONS. IF ANY PARTS ARE MISSING, CONTACT THE NATIONAL VENDORS PARTS DEPARTMENT IMMEDIATELY.

Read these instructions carefully before installing the kit.
Keep these instructions for part numbers and for future reference.
This kit contains the following :

PART NUMBER	DESCRIPTION	QUANTITY
1451097	SCREW - #8-32 X .31 HEX HD.TF-BL	4
1479119	MAGNET - RETAINER	1
2204513	WIRE TIE #PLT 1.5IM	2
3104053	TAPE - INSULATION	168 IN.
3154059	CLAMP - STAINLESS STEEL	2
4114101	TAPE - FOAM - 3.25 W X .38 TH	11 IN.
4241148	INSULATION ROD - .50	6 IN.
4311177	INSULATION ROD - .375	85 IN.
4311211	GASKET - FOAM - 1/8 X 1/2	245 IN.
4530006	INSTRUCTIONS - KIT - 4534040	1
4534042	WALL - DIVIDER - CONDENSER	1
4534043	SEAL - CONDENSER - INLET	1
4534045	BAFFLE - DISCHARGE	1
4534046	DUCT - 4 OD - UPPER	1
4534047	DUCT - 4 OD - LOWER	1
4534048	INSULATION - .75 - DISCHARGE	1
4534051	INSULATION - .15 - CHASSIS - BOTTOM	1
4534053	CAPACITOR - START - COMPRESSOR	1
4534054	OVERLOAD - COMPRESSOR	1
4534055	RELAY - COMPRESSOR	1
4534056	GUARD - THERMOSTAT	1
4534058	PAN - EVAPORATION	1
4534059	SPACER - COMPRESSOR	4
4534060	SCREW - #.25-20 X 2.25 - HEX, WASHER HEAD	4
4534061	BLOCK - FILLER - EVAPORATOR	1
4534062	SUPPORT - WALL - COND. INLET	1
4721035	SCREW - #8-18 X .38 - LGM	4
4744031	SEAL - .50 X.50	160 IN.
4747718	GROMMET - .281 ID X .250 LG	1

ITEMS NEEDED BUT NOT FURNISHED IN THIS KIT:

ALUMINUM TAPE, 2" WIDE
SILICONE CAULK
POLYURETHANE AEROSOL FOAM
13/32" DRILL BIT

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PRELIMINARY

Before starting the procedure below, verify that the machine has an operable refrigeration unit. Verify proper compressor operation after installing a new capacitor (4534053), a new compressor overload (4534054) and a new relay (4534055).

Part I. CABINET PREPARATION

1. Seal the perimeter of the large panel on the back of the cabinet with silicone. **See Figure 1.**

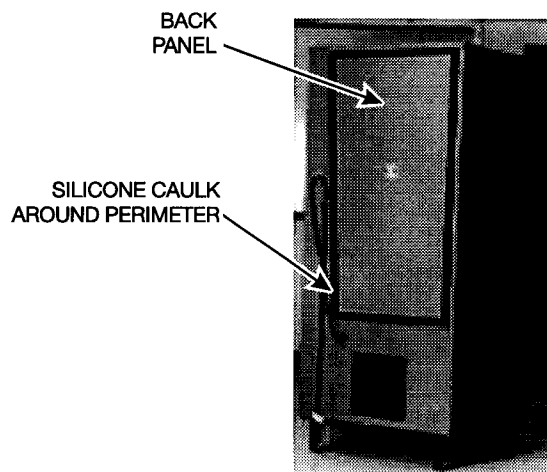
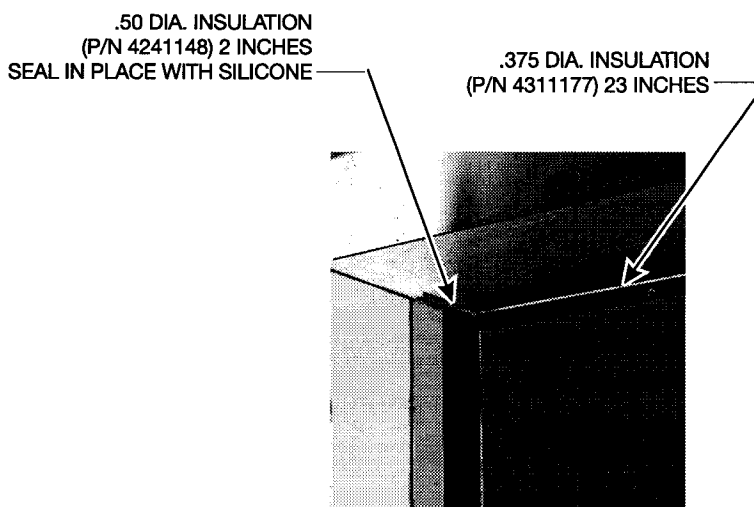


Figure 1

2. Insert 23 inches of .375 diameter insulation (4311177) in the gap where the top insulation meets the back. Do not use silicone. **See Figure 2.**
3. In the top, left, rear corner, add 2 inches of .50 diameter insulation (4241148). Seal with silicone. **See Figure 2.**



NOTE: TRAYS AND RAILS ARE REMOVED FOR CLARITY

Figure 2



4. Above the front and right sides of the discharge box, install approximately 12 inches of .375 diameter insulation (4311177). **See Figure 3.**
5. Using silicone, affix the .75 inch insulation (4534048) to the upper inside surface of the discharge box. **See Figure 3.**
6. In the upper right corner, fill the space where the discharge box and top meet with approximately 16 inches of .375 diameter insulation (4311177). Seal with silicone. **See Figure 3.**
7. Install the new 4.0 inch ducts as follows: **See Figure 3.**
 - a. Begin by closing the lock seams. The shorter of the two aluminum ducts (upper - 4534046) installs on the discharge box with the crimped end on the bottom. There is a series of four small holes along the length of each duct. The rear holes are to aim directly at the left side of the cabinet. The forward holes will then aim toward the center of the chilled space; the lock seam will be to the back. Secure the top by drilling a .125 diameter hole through both pieces and secure with a pointed sheet metal screw (4721035). Seal the joint with aluminum tape.
 - b. The lower duct (4534047) aligns the same way. Drill a .125 diameter hole through the lower duct into the upper duct and secure with a pointed sheet metal screw (4721035). Seal the joint with aluminum tape.
 - c. Cut 19 inches from the original flex duct and attach it to the bottom of the new aluminum duct with one of the original clamps. Discard the remaining flex tube. Save the second clamp for reuse later in the installation.

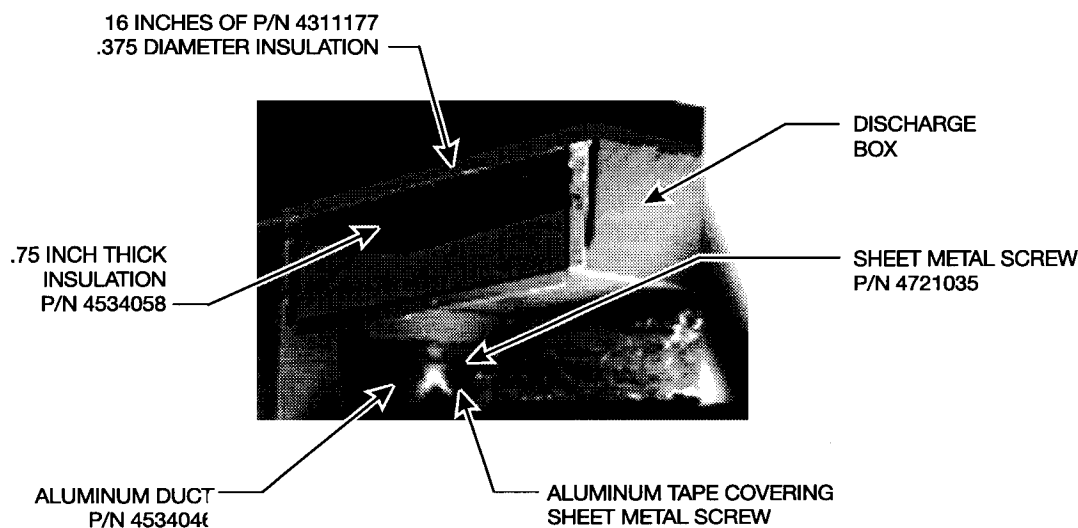


Figure 3



8. Remove the protective film from the discharge baffle (4534045) and install it on the discharge box. Position the baffle so the three rows of holes are on top. Secure it in place with two of the black hex head screws (1451097) **See Figure 4.**

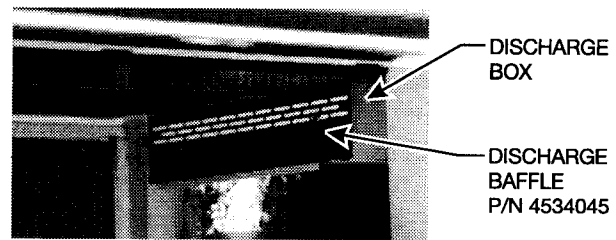


Figure 4

9. Install the .125 x .50 foam gasket (4311211) door seals as follows:
 - a. **TOP**- Starting at the far right side, apply 25 inches of foam gasket across the width and around the corner to the hinge over the existing seal. **See Figure 5.**
 - b. **HINGE SIDE**- Apply 64 inches of foam gasket to the **RIGHT** of the hinge, flush with the right edge of the hinge leaf. **See Figure 5.**

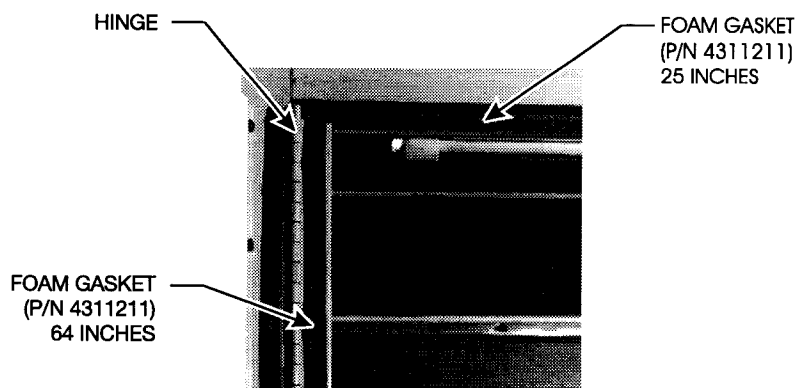


Figure 5



- c. **LATCH SIDE**-Start below the new top seal and apply 64.5 inches of foam gasket covering the existing gasket down and around the bottom corner. There will be a break at the top and bottom of the slide-out control panel. **See Figures 6 and 7.**

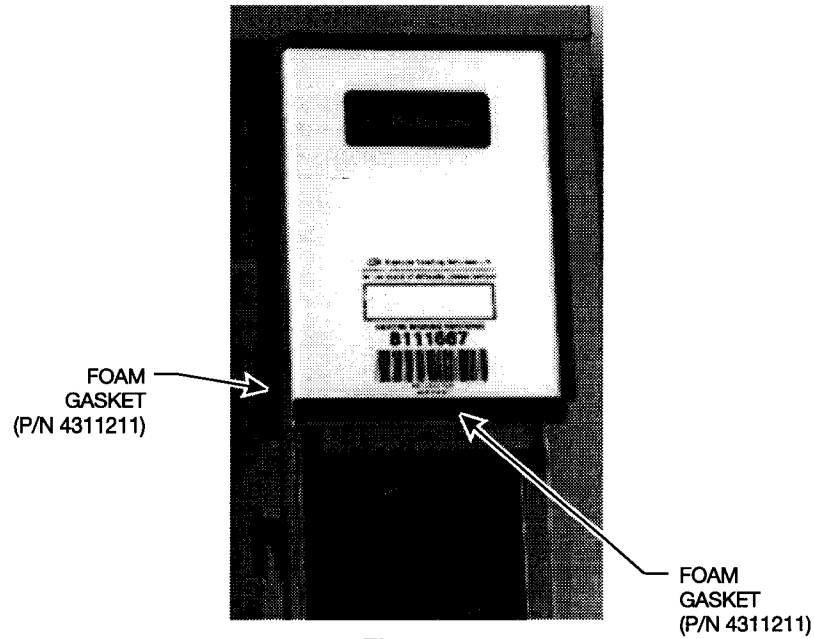


Figure 6

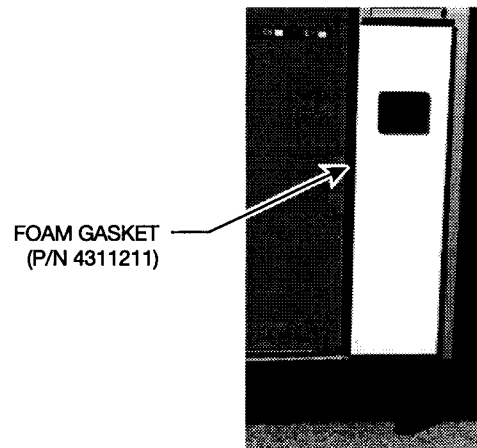


Figure 7



10. Apply 5.5 inches of .125 x .50 foam gasket (4311211) on the cabinet behind the top edge of the slide-out control panel. **See Figure 6.** With silicone, secure 5.5 inches of .375 diameter insulation (4311177) to the gap on the back side of the bottom edge of the control panel. **See Figure 8.**

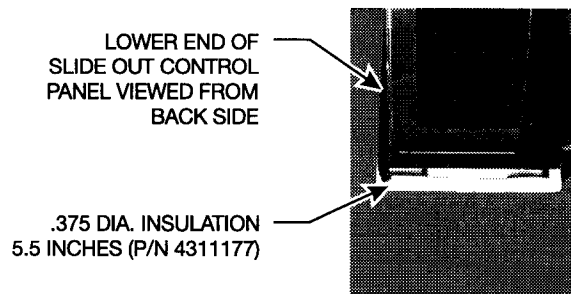


Figure 8

11. Prepare the bottom condenser air inlet opening by removing back about 1 inch of the polystyrene insulation. Place a paper drop cloth beneath the machine to catch excess foam. Fill the void around the perimeter of the opening with the aerosol foam. It will take about ½ hour before the foam can be trimmed with a hacksaw blade or a sharp knife. Allow 24 hours for a complete cure of the foam **See Figure 9.**

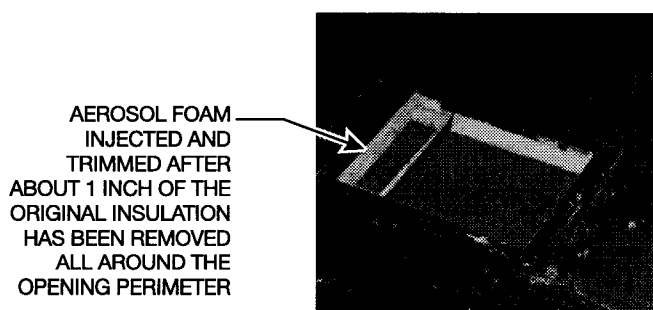


Figure 9



Part II. DOOR

1. On the door exterior, neatly seal around the grey extrusions with silicone. Do the same on the seam where the hinge attaches to the door seal inside and out. **See Figures 10 and 11.**

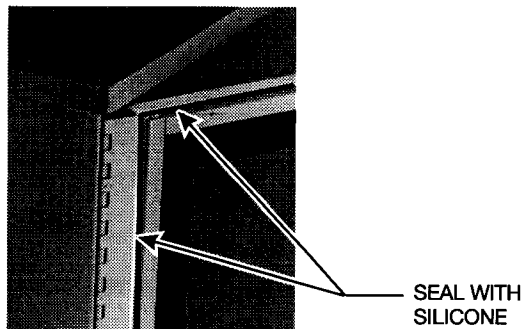


Figure 10

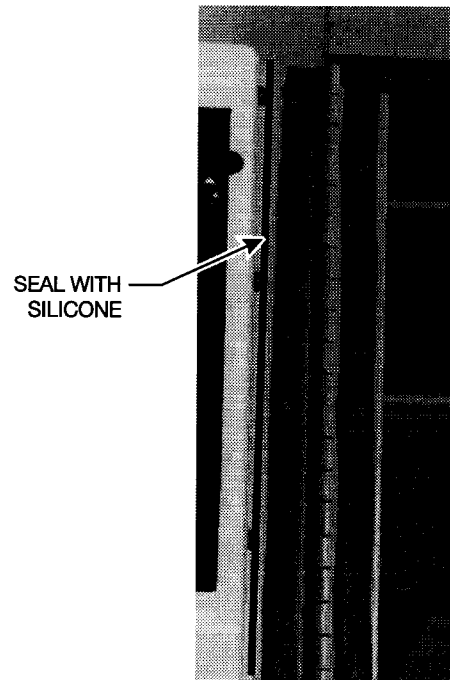


Figure 11

2. Across the inside face at the bottom, apply 23 inches of .125 x .50 foam gasket (4311211). **See Figure 12.**

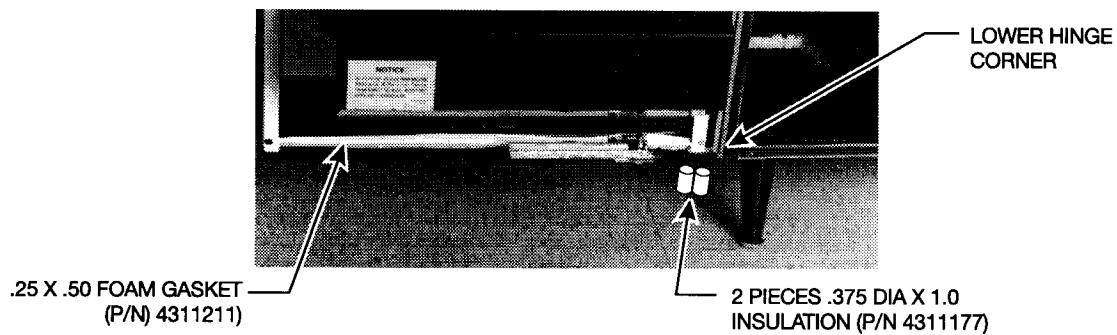


Figure 12

3. In the lower hinge corner, fill the gap with two 1-inch pieces of .375 diameter insulation (4311177). Seal with silicone. **See Figure 12.**



4. Prepare the vend door assembly as follows:

- a. Remove the vend door assembly.
- b. Apply 16.5 inches of .125 x .50 foam gasket (4311211) to the top edge of the outer door. Position this gasket .25 inches back from the radius and extend it out over the end seals. **See Figure 13.**

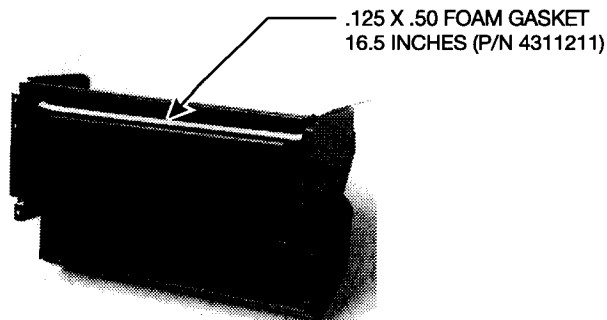


Figure 13

- c. Along the bottom forward edge of the inner door, laminate the Pressure Sensitive Adhesive (PSA) side of the magnet to the non-PSA side of a 4.5-inch piece of .125 x .50 foam gasket (4311211) and affix the foam PSA to the center of the door against the flange. **See Figure 14.**

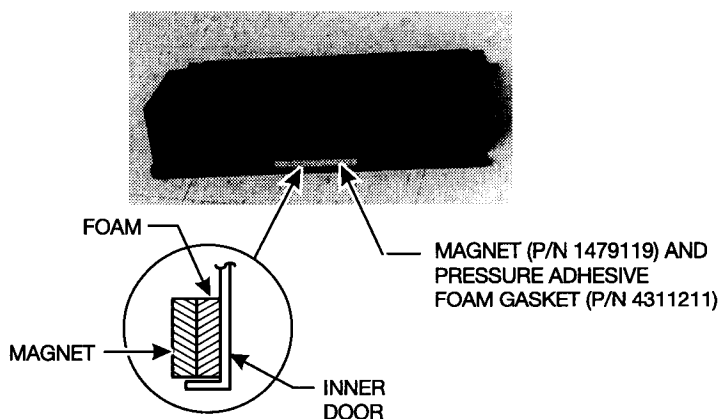


Figure 14

- d. Apply a total of 13.5 inches of .5 x .5 foam seal (4744031) outward from the magnet to both ends of the door. **See Figure 15.**
- e. Reinstall the vend door and adjust as required to minimize gaps without dragging.

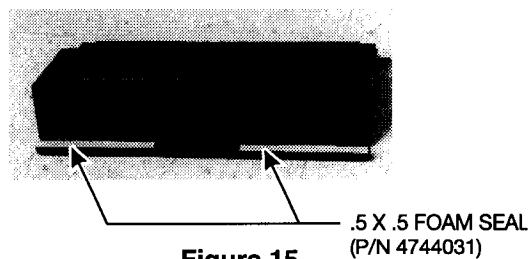
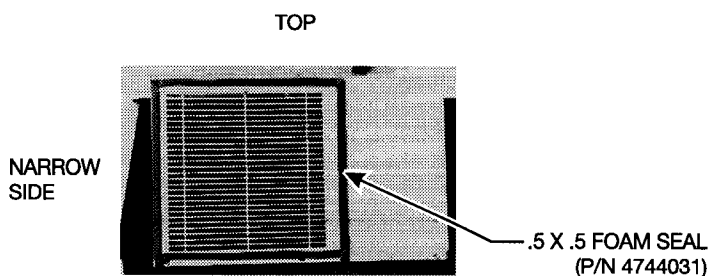


Figure 15



Part III. REFRIGERATION UNIT

1. Remove the cover and replace the rear foam seal with 48 inches of the .5 x .5 foam seal (4744031). Space the new seal back from the grille .5 inches from the top, bottom and narrow side. Space it back 1 inch on the wide side. **See Figure 16.**



BOTTOM

Figure 16

2. Carefully cut the tape sealing the top insulation and remove. **See Figure 18.**

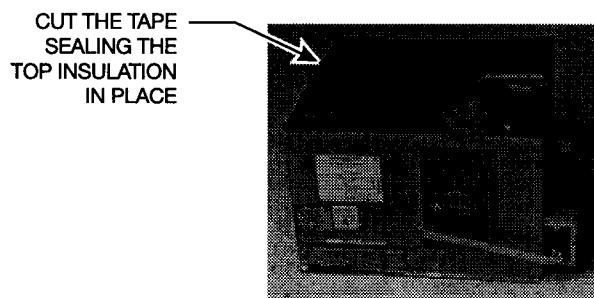


Figure 17

3. Remove the screws attaching the condenser fan and set aside. Remove the two screws in the bottom of the fan wall. **See Figure 18.**

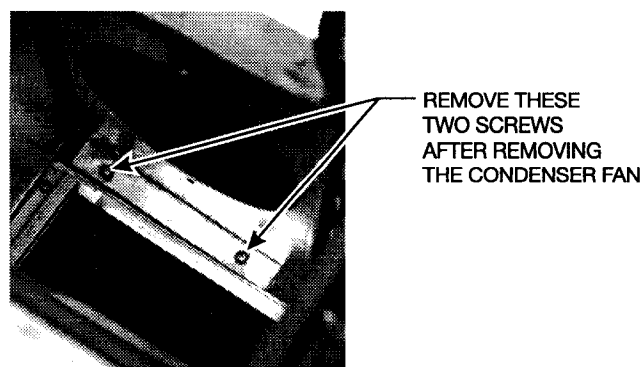


Figure 18



4. Apply 11.25 inches of .5 x .5 foam seal (4744031) to each of the two sides of the new divider wall (4534042). **See Figure 19.**

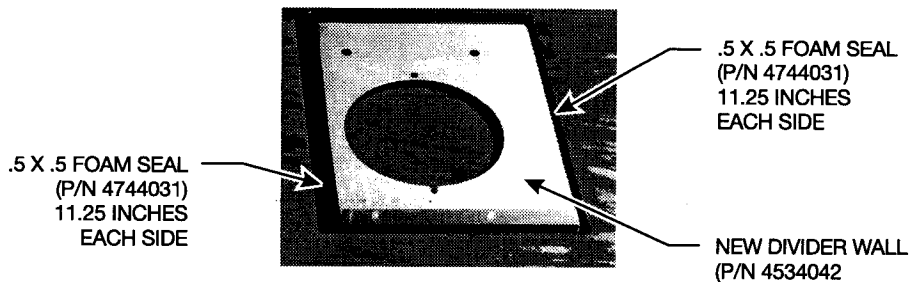


Figure 19

5. Position the new wall (4534042) in front of the existing wall. Reinstall the two bottom screws and the (rear discharge) condenser fan.
6. Undo the thermostat and carefully straighten and remove it for reuse. **See Figure 20.**
7. Undo the right and front side walls, folding them outward.
8. Remove four bolts holding the compressor. Discard the old bolts and evaporation pan(s). Save the washers.

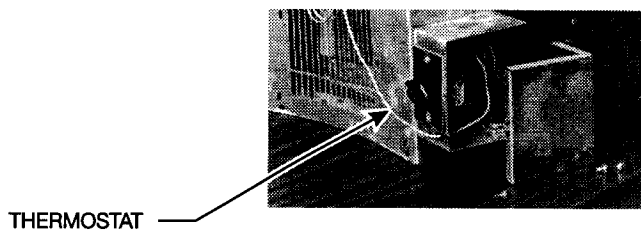


Figure 20

9. Seal the corners of the pan (4534058) with silicone and then insert the new pan under the compressor. **See Figure 21.**

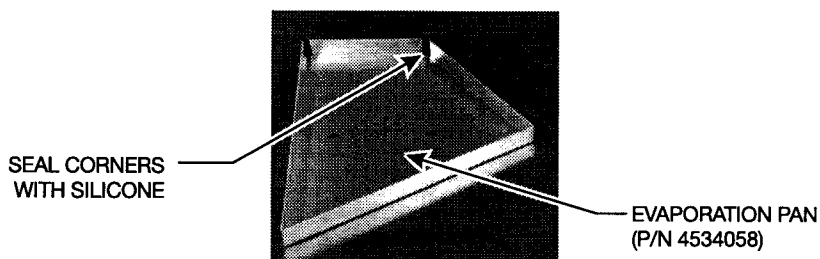


Figure 21



10. Prepare the compressor as follows:

- a. Position two compressor spacers (4534059) under the side farthest from the condenser. This will aid in alignment. **See Figure 22.**
- b. Install two 2.25-inch long hex screws (4534060) along with existing washers but do not tighten.

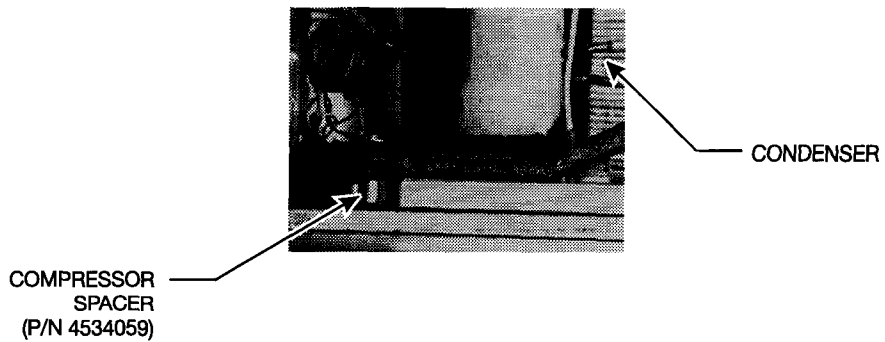


Figure 22

- c. Apply a small amount of silicone to the two remaining spacers (4534059) and position in the pan. Align and install hex screws (4534060) along with existing washers. **See Figure 23.**

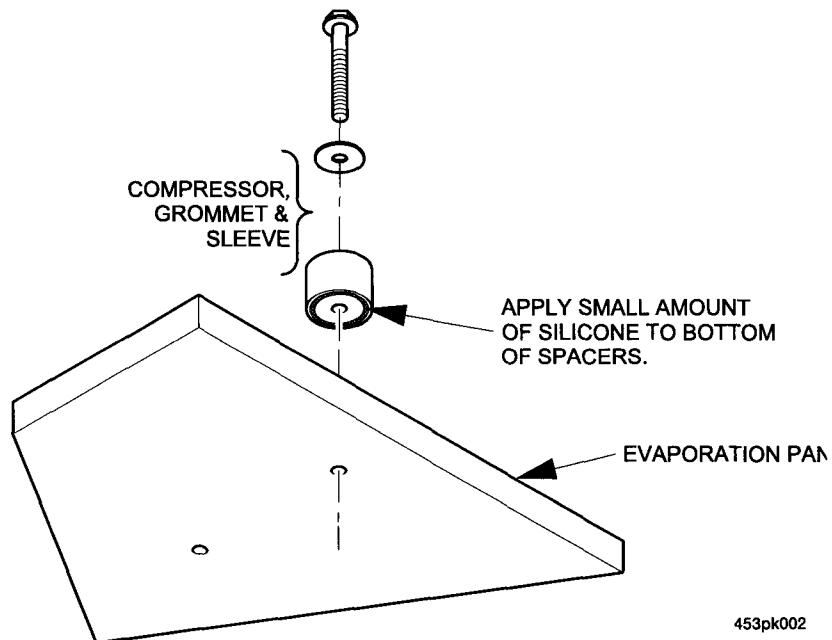


Figure 23

- d. Position liquid line in pan as low as possible, while not allowing it to contact the sides of pan or the spacers. **See Figure 24.**
- e. Tighten all compressor bolts.

11. Carefully bend the evaporator drain tube down until it touches the chassis and rests on the edge of the condenser pan. **See Figure 24 & 29.**

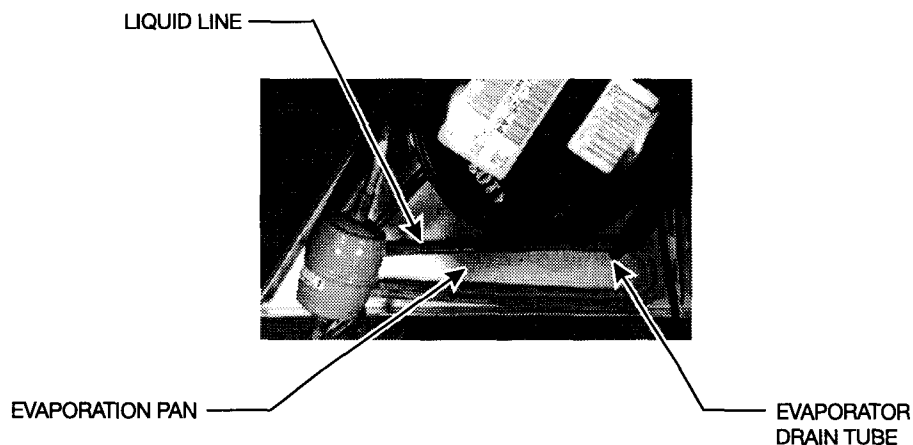
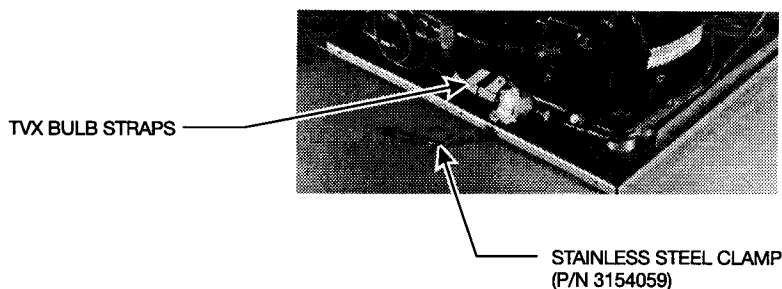


Figure 24



12. Replace the brass TXV bulb straps with the two stainless steel clamps (3154059) provided. Position the bulb at the two o'clock position on the tube as viewed from the front of the cabinet. **See Figure 25.**



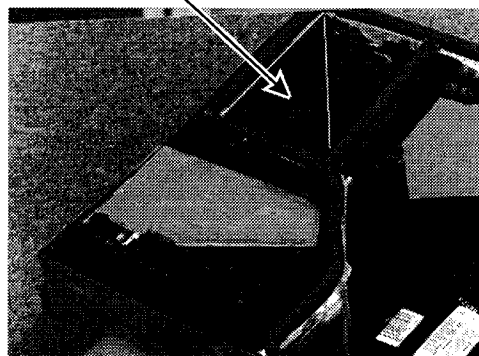
13. Remove the screws attaching the evaporator fan and set aside. Also remove the two screws which hold the evaporator housing to the chassis.

Figure 25

14. Install the condenser inlet wall support (4534062) against the front wall with the cutout facing down. Adhere with silicone or aluminum tape. **See Figure 26.**

CONDENSER INLET WALL SUPPORT (P/N 4534062)

15. Place 11.25 inches of the 3.25 x .38 foam tape (4114101) on the wall next to the evaporator, flush with the front wall. Begin at the bottom of the wall.



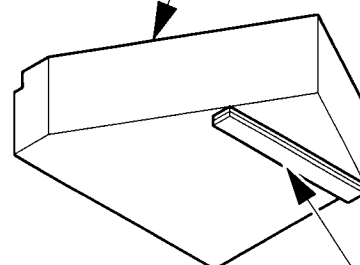
16. Reinstall the screws holding the evaporator housing to the chassis.

17. Undo the cover over the evaporator.

Figure 26

18. Apply a double layer of .125 x .50 foam tape (4311211) across the bottom face of the filler block (4534061) - *this is the face without the groove* - parallel to the groove and farthest from the groove. **See Figure 27.**

EVAPORATOR FILLER BLOCK (4534061)



DOUBLE LAYER FOAM TAPE (4311211)

453pk003

Figure 27



19. Slide the filler block down to the chassis with the groove facing up. **See Figure 28.**

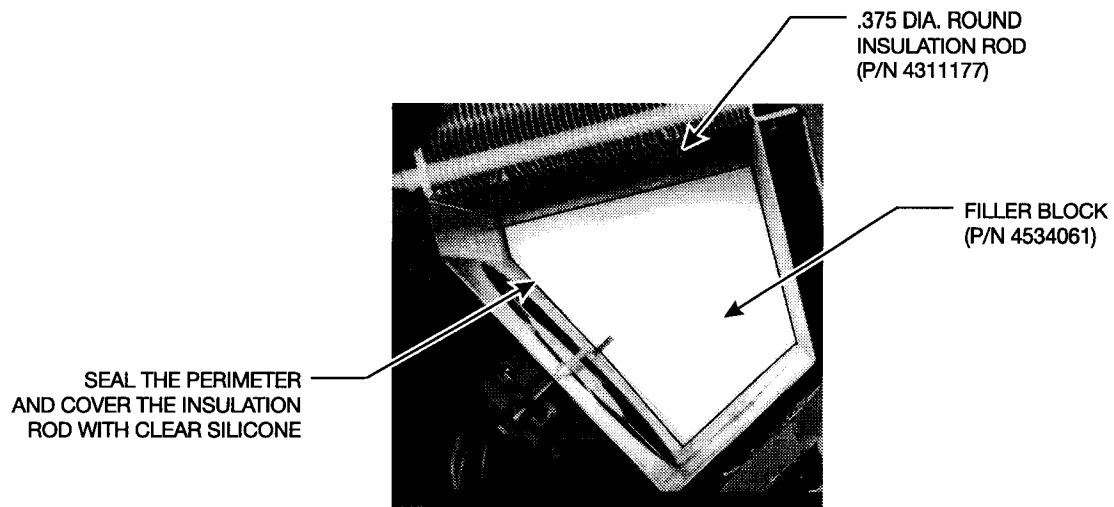


Figure 28

20. Press 6 inches of .375 round insulation rod (4311177) into the bottom of the groove between the filler and the condensate pan. **See Figure 28.**
21. Seal the perimeter of the filler and along the insulation rod seam with silicone. ***Be careful to not block any fins.*** **See Figure 28.**
22. Replace the evaporator cover.



23. With cork tape (3104053), single wrap the condensate drain tube to the divider wall and the portion not over the new pan. The bend in the tube must be close to the chassis to form a trap. The outlet end must rest on the new evaporation pan. **See Figure 29.**

NOTE: SHOWN WITH SIDE WALLS REMOVED FOR CLARITY

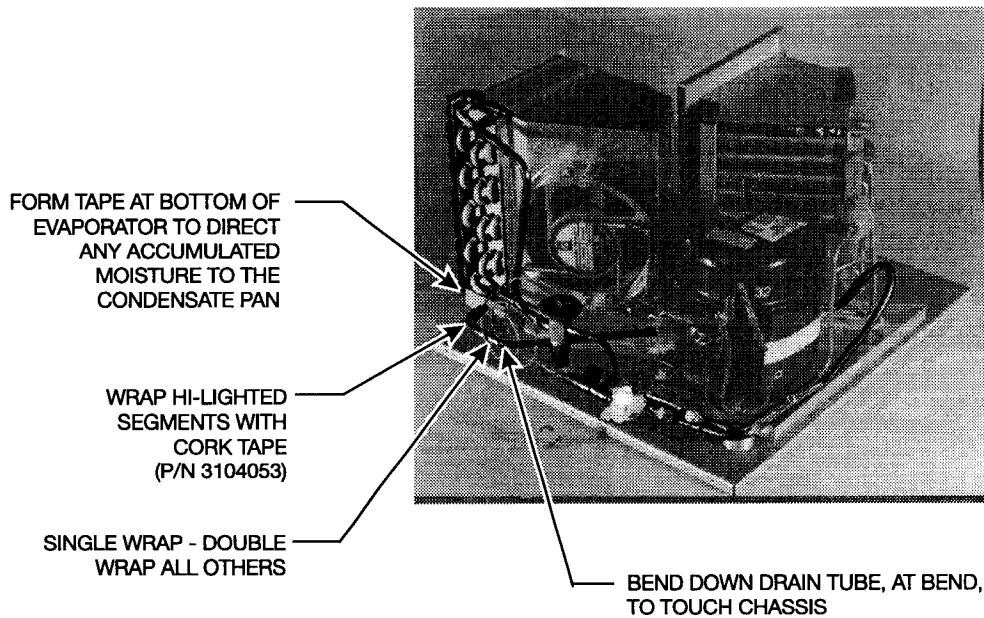


Figure 29

24. Reinstall the evaporator fan.
25. Double wrap, with cork tape (3104053), all refrigerant lines from the evaporator to the rear of the unit, around and through the heat exchanger, including the TXV. Compress the cork tape to minimize air pockets. **See Figure 29.**
26. With vertical strips of cork tape (3104053), cover all return bends, over the end sheet and around the shroud toward the fan, to the shallow bend in the shroud. Form cork tape to the end of the condensate pan to guide any moisture into the pan. Cover all cold metal surfaces. **See Figure 29.**
27. Check the permagum seals where the drain and refrigeration lines pass through the wall. **See Figure 30.**
28. Reinstall the side wall.

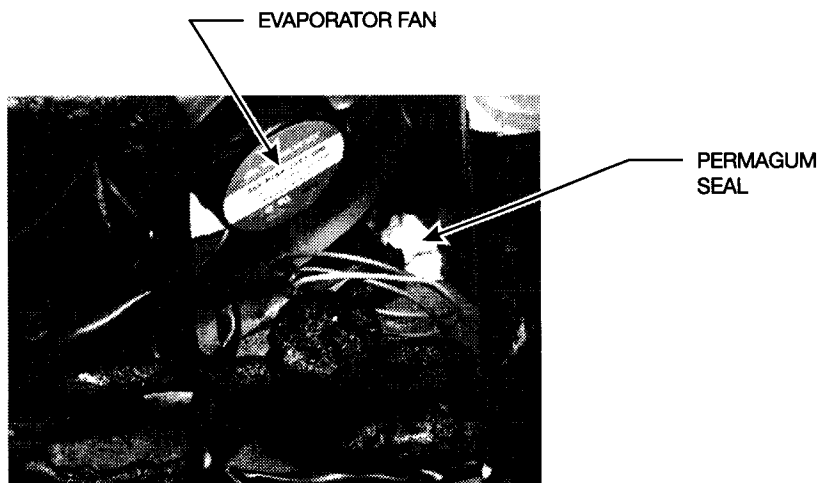


Figure 30



29. Seal with silicone the 4-inch diameter collar on the right side of the unit. **See Figure 31.**

SEAL 4" COLLAR
WITH SILICONE

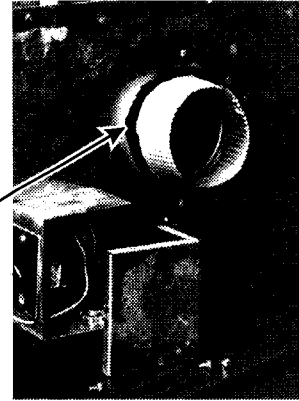


Figure 31

30. Install 61 inches of .5 x .5 foam seal (4744031) to the top of all .5-inch thick insulating panels. Use a continuous piece along the wall separating the evaporator and condenser sections. **See Figure 32.**

INSTALL .5 X .5 FOAM
SEAL (P/N 4744031)
ON TOP OF INSULATING
PANELS AS HI-LIGHTED

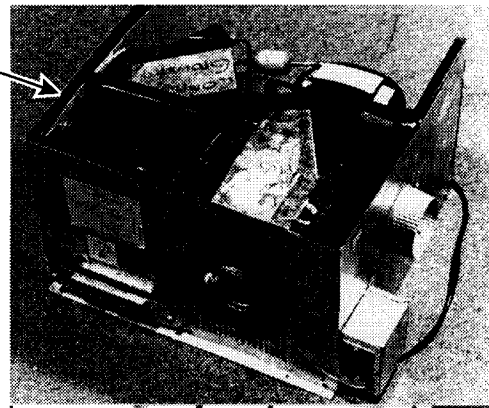


Figure 32

31. Drill a .406 diameter (13/32) hole in the knob face of the thermostat housing. Locate the hole .60 inches in and .50 inches up. Cut a narrow horizontal slot, with shears, to clear the capillary tube. Install grommet (4747718). **See Figure 33.**

DRILL HOLE AND
INSTALL GROMMET
(P/N 4747718)

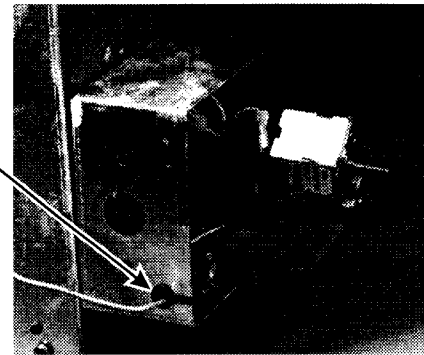


Figure 33



32. Reset the thermostat as follows: **See Figure 34.**

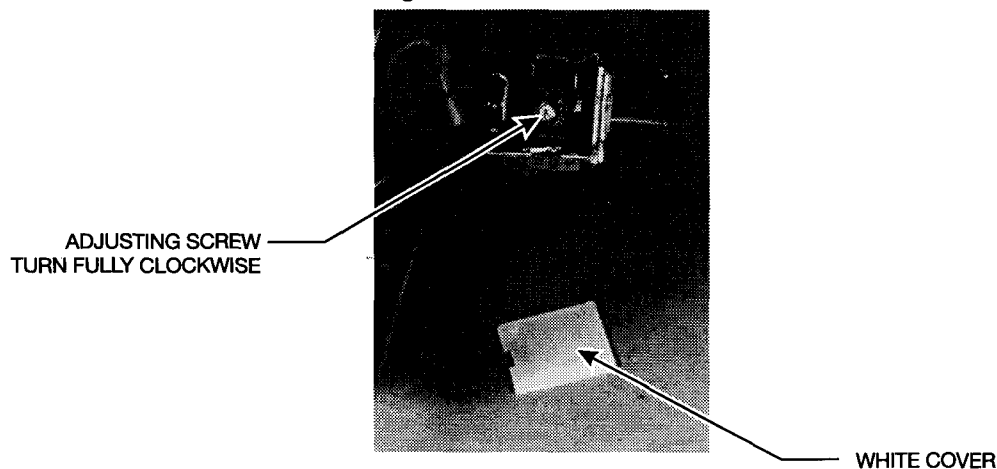


Figure 34

- a. Remove the small white cover.
- b. Turn the internal adjusting screw fully clockwise. Make it snug being careful to not overtighten. Then back it off three full turns.
- c. Reinstall the white cover.
- d. Reinstall the thermostat, feeding the capillary tube forward through the new grommet.
- e. Reinstall the housing cover.

33. Form the thermostat capillary tube as follows: **See Figure 35.**

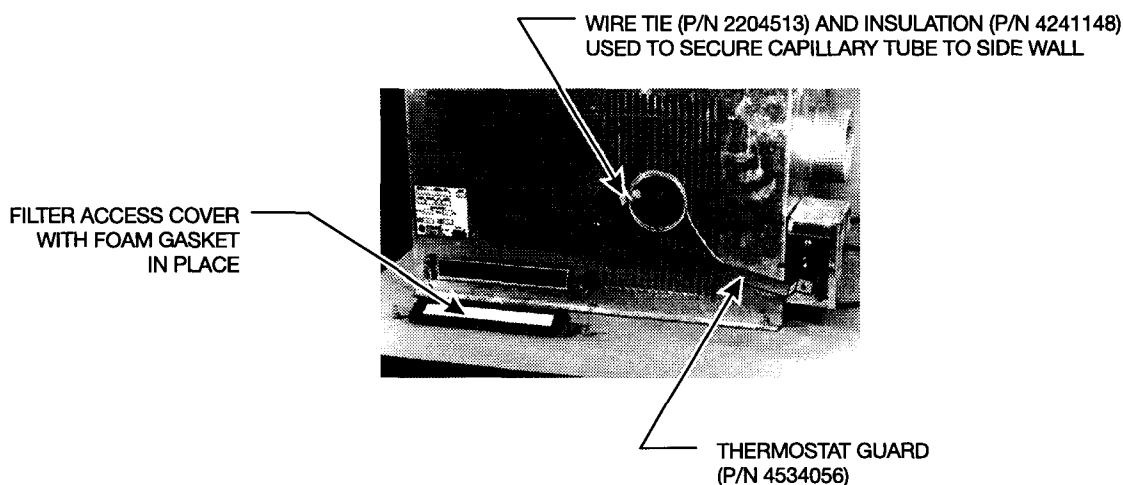


Figure 35

- a. Bend the tube around and near the front, toward the center of the evaporator inlet.
 - b. Form approximately a 2.5-inch diameter coil.
 - c. Using a wire tie (2204513) and a 1-inch piece of .5 diameter insulation (4241148) as a spacer, secure the coil to the middle of the inlet grille. **The capillary tube must not touch any of the sheet metal.**
34. Install the thermostat guard (4534056). Use the lower screw and hole on the left side of the evaporator opening and the lower screw and hole in the thermostat housing box. **See Figure 35.**
35. Remove the filter access cover. Adhere 18 inches of .25 x .50 foam gasket (4311211) around the perimeter and on top of the existing cork, on the cover. **See Figure 35.**



36. Clean the filter and reinstall. The filter should be cleaned weekly from now on. **Do not operate the unit without the filter in place.**
37. Remove the existing condenser inlet seal and adhesive from the underside of the refrigeration unit. Install a new condenser inlet seal (4534043). Apply a bead of silicone along the thin side, between the seal and the chassis flange. Allow to dry. **See Figure 36.**

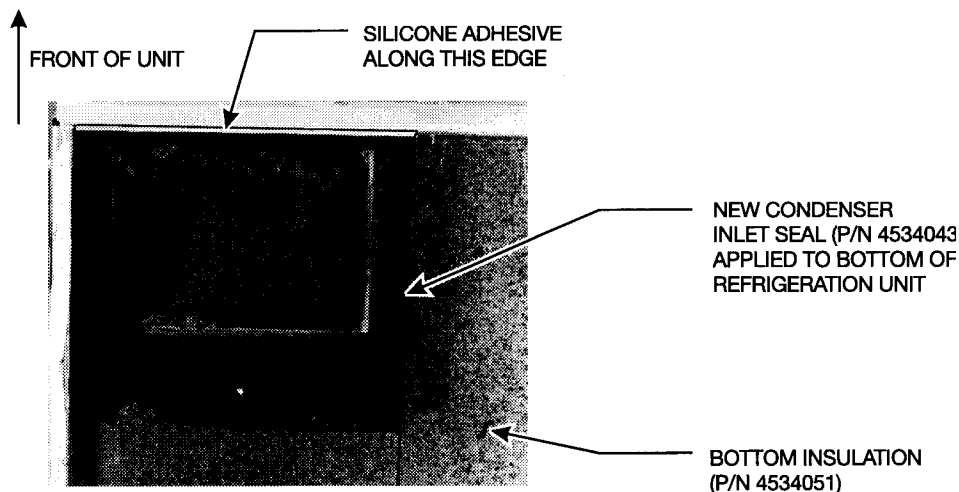


Figure 36

38. On the same surface as the new seal and directly next to it, against the front of the unit, form the bottom insulation (4534051) over the screw points in the corner under the evaporator. Remove the bottom insulation, apply silicone adhesive and reposition over the screw points.
39. Reinstall the unit, being careful to not trap power cords in the back.
40. Reattach the 4-inch flex duct with the original hose clamp.

Part IV. FINAL CHECKOUT

1. Connect the machine to the power outlet and turn on the power.
2. Check the unit for pulldown to setpoint and cycling of refrigeration unit.
3. Consult the service manual for refrigeration troubleshooting information if necessary.