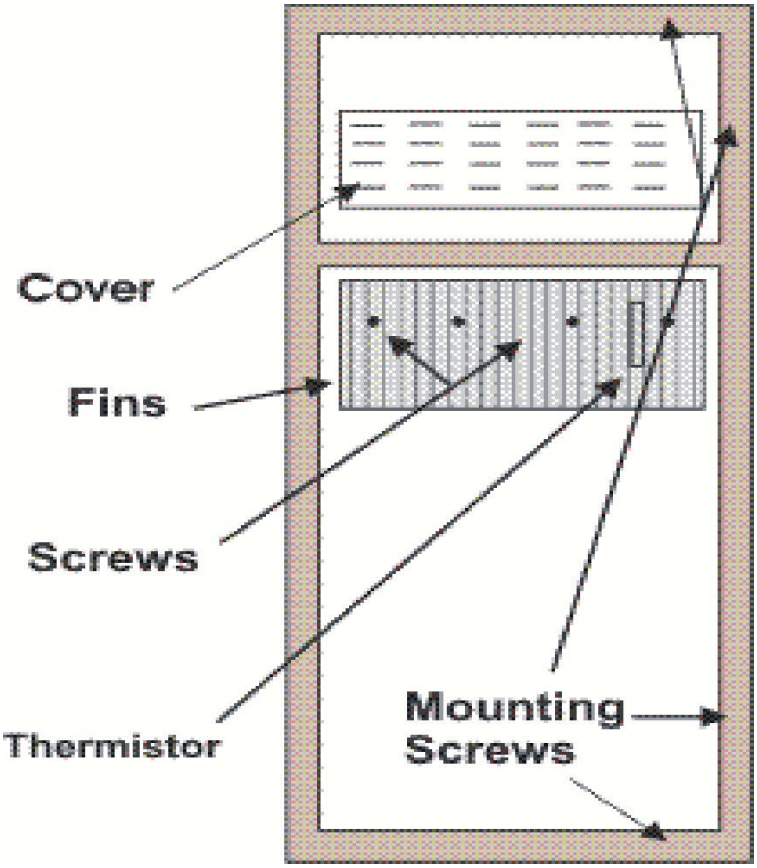
Changing a Cooling Unit Americana and NDR Series NOTE.. This info is for the new style cooling units, meaning refrigerators with no freezer bar shelf. If you have a freezer bar/coil shelf in the freezer then you need the info for the old style cooling unit.

Pulling the Refrigerator. The first step in changing a cooling unit is to pull the refrigerator from its cabinet in the RV. Start by turning off the propane at the main LP Tank(s) and burning off any residual propane in the lines at a stove top burner. Next, from the outside access door for the refrigerator, disconnect the propane line to the refrigerator, unplug the 120 volt cord, and disconnect the 12 volt wiring to the refrigerator. Tape up the ends of the 12 volt wires with electrical tape to prevent sparking. While still at the back of the refrigerator locate the screws that are usually at the bottom outside edges of the refrigerator (the feet), securing it to the cabinet floor, and remove them. Some manufactures may use more or different areas.

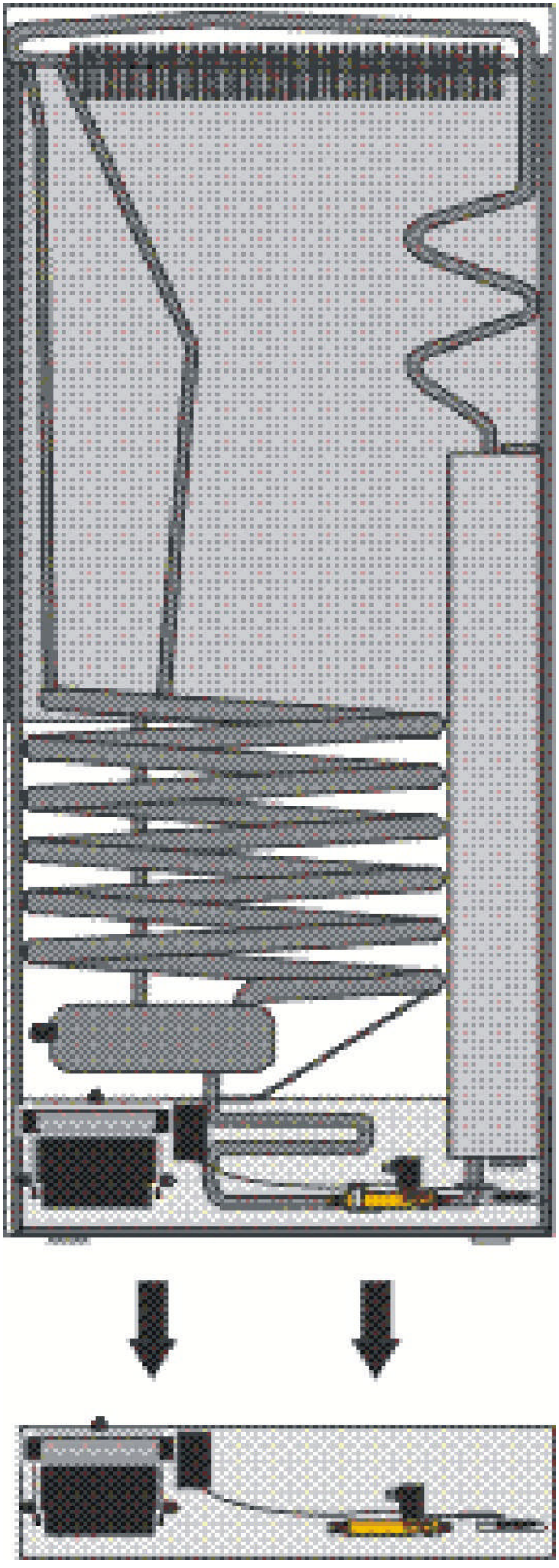
Next remove the refrigerator doors. Removing the doors is **optional**, by doing so makes the refrigerator lighter and easier to work with. I only remove the door handles, so the unit will lay flat on the floor. There are screws at the top and the bottom of the refrigerator. See graphic below. These need to be removed. Look for any other fasteners that might prevent removal of the refrigerator. Next, inside the RV, underneath the refrigerator, there is usually a bead of silicone that needs to be cut with a razor knife. The refrigerator should then be free and slid into the RV. If it doesn't move, look around for something else holding the refrigerator in. Sometimes RV manufacturers create their own ways of securing the refrigerator. Sometimes the front frame legs is behind the wood trim and must be lifted a little to get it over the slightly raised edge.. There's no need to remove the refrigerator from the RV, but if needed take the refrigerator out of the RV to a larger work area, this is only an option to do. Sometimes it is harder to get it through the RV door, other wise just lay the unit flat in the floor for the change out process.



Removing of the Cooling Unit: Unclip the thermistor from the fins inside the refrigerator (it clips on) and also remove all screws from the fins. Next, slide the cover inside the freezer up or remove, to expose the screws behind it and remove both rows. See graphic above. What to know what to look for:
The fins maybe taped to the inside liner of the box, and when the cooling unit is pulled, the fins will sometimes remain inside the box, that's OK for now. Very often there are discrepancies in the foam of the cooling unit that causes the fins to stick to the cooling unit. That's the better to have when you pull the cooling unit.
If your fins do stay in place be sure to mark top & **remove fin from the box** even if they are taped in place. Pull fins out an lay to the side.
The result of prying the cooling unit out without removing the fins screws will invariably cracks the liner of the box. It's best to
plan on the fins coming out with the cooling unit. If you look closely, you'll see that the interior liner overlaps the fins so do not try to remove the fins by pulling them from the inside. Once the work inside the refrigerator is done, slide out and lay the refrigerator on it's face. Depending
on the circumstance, it may be necessary to lay a blanket down to protect the face of the refrigerator.

Be sure you remove fins from refrigerator box an install on new coils before you lay cooling unit back in place.

The cooling unit is the set of coils on the back of the refrigerator, extending from the top to the bottom. This is what we're after. Obvious parts such as burner assemblies, Electric heat elements etc. need to be removed from the unit. Many of these models have a good portion of their control parts fastened to a piece of sheet metal that can be removed as one unit. See graphic below. Take a close look at yours to see if this is the case. Some wires will need to be disconnected from the circuit board, and the burner mount screws will need to be removed. Pull the wire harnesses through the cooling unit to allow for its removal. On some models there is a two wire harness that is spliced in such a way that it needs to be cut. You don't want to cut wires unnecessarily, but this one you have to. When you're done with the installation, you can splice the two wires together. On the bottom of the refrigerator, there are two extruded pieces (the feet) that need to remove the top screws and swing the legs apart just enough for the control assembly to be slid/ lifted out. Removing one screw on each foot and pushing them out of the way can damage the plastic at the front of the refrigerator. You can completely remove the feet. If, on your model, the components are mounted individually, you will need to remove the necessary ones for the cooling unit removal. There are handful of obvious screws holding the cooling unit to the refrigerator that need to be removed.



Once all fasteners and accessories have been removed, the cooling unit is ready to pull. Use a pry bar under the "big tube", as in the graphic below, to pull up on the cooling unit. Because of the configuration of the tubes, you will need to snake the bar between them and will only be able to pull up a couple of inches. The "big tube" is the only pipe that should be pried on. Since you will be prying against the refrigerator body, a board or some other protection is necessary between the pry bar and the refrigerator to prevent poking a hole in the box. Give the pry bar a couple of quick jerking up pulls, If you're lucky, the cooling unit will pop up from prying. If the unit foam pack needs to be dug out to free the coils that's OK as the upper foam block is completely replaced.

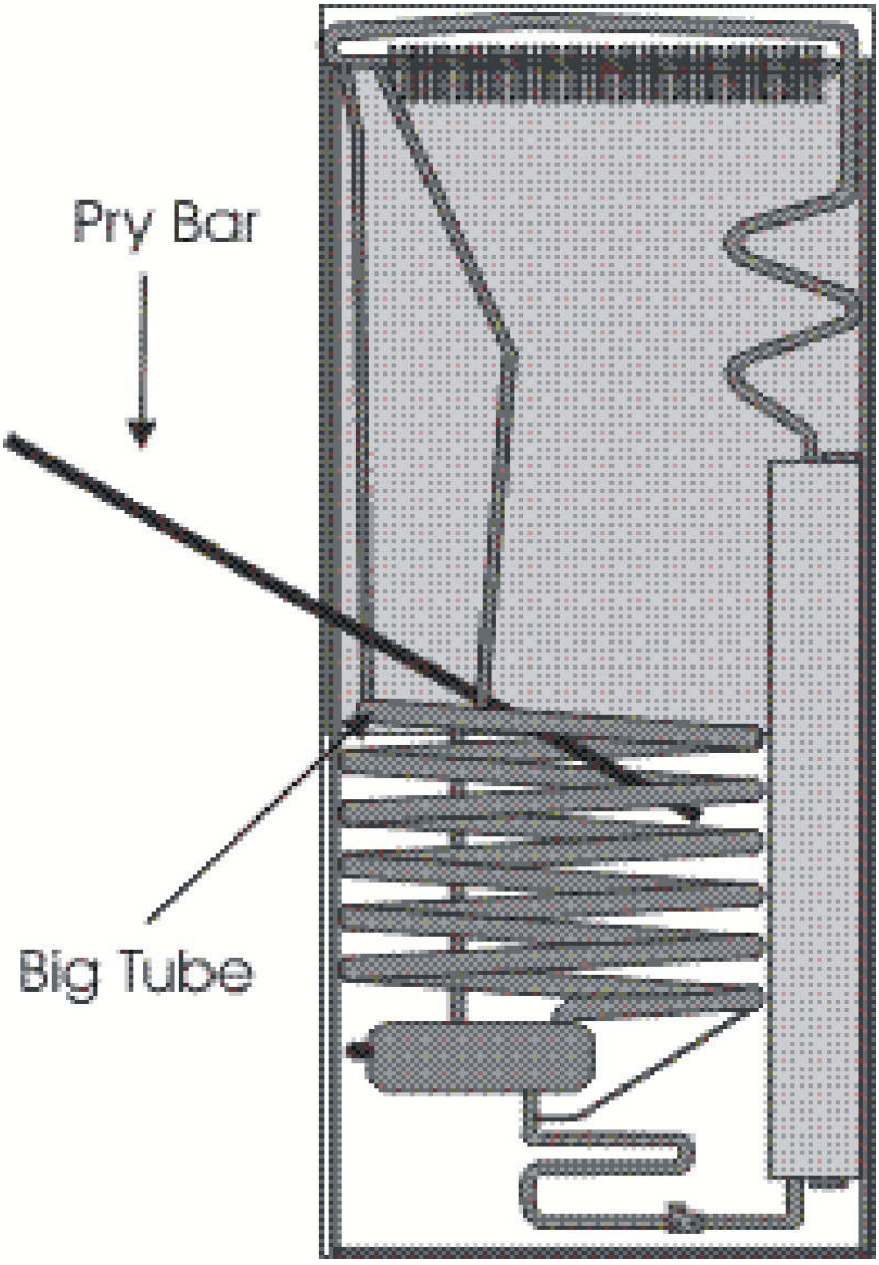
If your cooling unit is one of the very stubborn ones and won't come out, you'll need to break some of the foam to relief some of the pressure. Start at the top left or right corner, inserting your pry bar deep into the foam pack at at 45 degree angle to pry out the block. Pry and pop out some of the foam. Stick pry bar into other location, pry out again till you can pull cooling unit out.

Clean out the old stuck spots of the foam.

If you're still having problems, go back and be sure you have removed all fasteners in the freezer. I find the hard fast upward jerking does the best. If needed you can pry out more hunks of the upper foam of

the cooling unit as this will be replaced. NOTE!! Be sure when you jab the pry bar deep into the foam pack at the 45 degree angle deeper the better

that you only do this at the upper half. The lower half has no protective metal plate under the foam and deep pry bar could damage the liner in the refrigerator food zone around the fins.



You can lift up the backer to see the seam, jab the pry bar into the upper left or right deep into foam block to pop the foam block out.

Once the cooling unit is out, leave the refrigerator down on its face. **If the fins stayed in the refrigerator remove them and place on the cooling unit after the bead of thermal mastic was applied.** do not forget the bead of thermal mastic on the rest of replacement cooling unit. Pull the baffle from the old cooling unit chimney to transfer over. (do not forget it) (NOTE: Brand-new cooling units

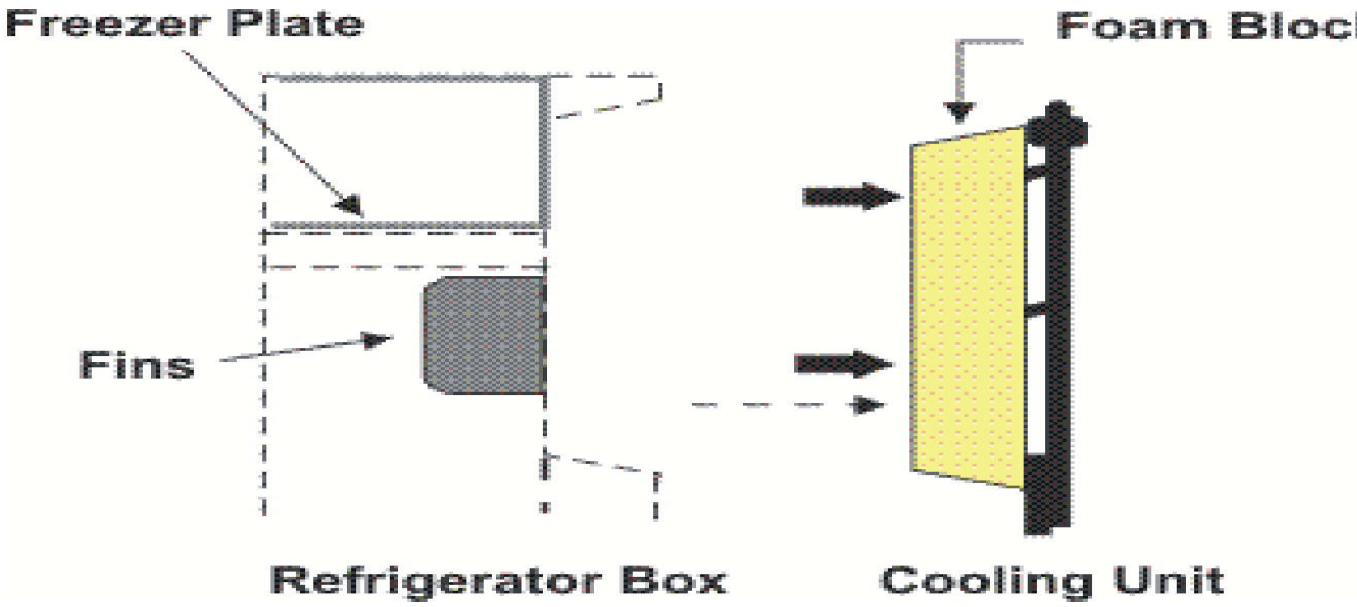
will come with the baffle already in place)..Do not forget the baffle reman's only and remove any other parts, including the insulation pack around the heating element, from the unit.(NOTE: Brand-new cooling units
will come with the insulation pack in place) These parts will be

transferred to the replacement cooling unit. **Not transferring the baffle** from the old unit to the replacements is the most common mistake made by installers. Be sure you are familiar with what the baffle is. You're now done with the removal.

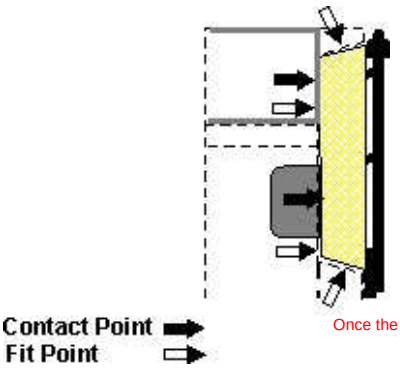
Installation: The key to a successful cooling unit installation and the main concern is Freezer screw tight, fin screw tight, and air tight seal of cooling unit foam block. Foam block in the cavity of the refrigerator and no air leaks using the spray foam to seal. Sometimes when needed, Best way to get the cooling unit to the fit the cavity, stand on the foam pack and give a bounce to push the coils deep into the cavity. Sometimes, because of refrigerator box variations, the foam pack protrudes a little out the back, that's not a problem. This is OK, along as your main concern freezer screws tight fin screws tight inside of the refrigerator. The best way to get the cooling unit into the back after the mastic is applied, stand on the cooling unit an with a slight bounce pressure the cooling unit will bottom out. Do not try to close the gap around the fins, this is not a concern with any cooling unit replacement.

In the graphics below, there is a metal to metal contact point that requires thermal mastic. This refers to a fit point --> a point where the cooling unit has to make good, snug contact with the refrigerator box.

No air leaks mentioned above is cured by the use of Spray foam furnished, detail later.

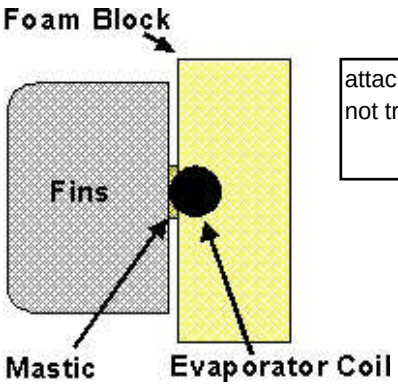


It is not uncommon the the outer frame to be received bent, the frame can be flexed back. The outer frame does not hold cooling unit in place. The freezer screws hold coils. Frame is only to protect the refrigerator box edges.



Once the cooling unit is laid into the fresh sprayed foam, it will seal this fit point area maked. Details below:

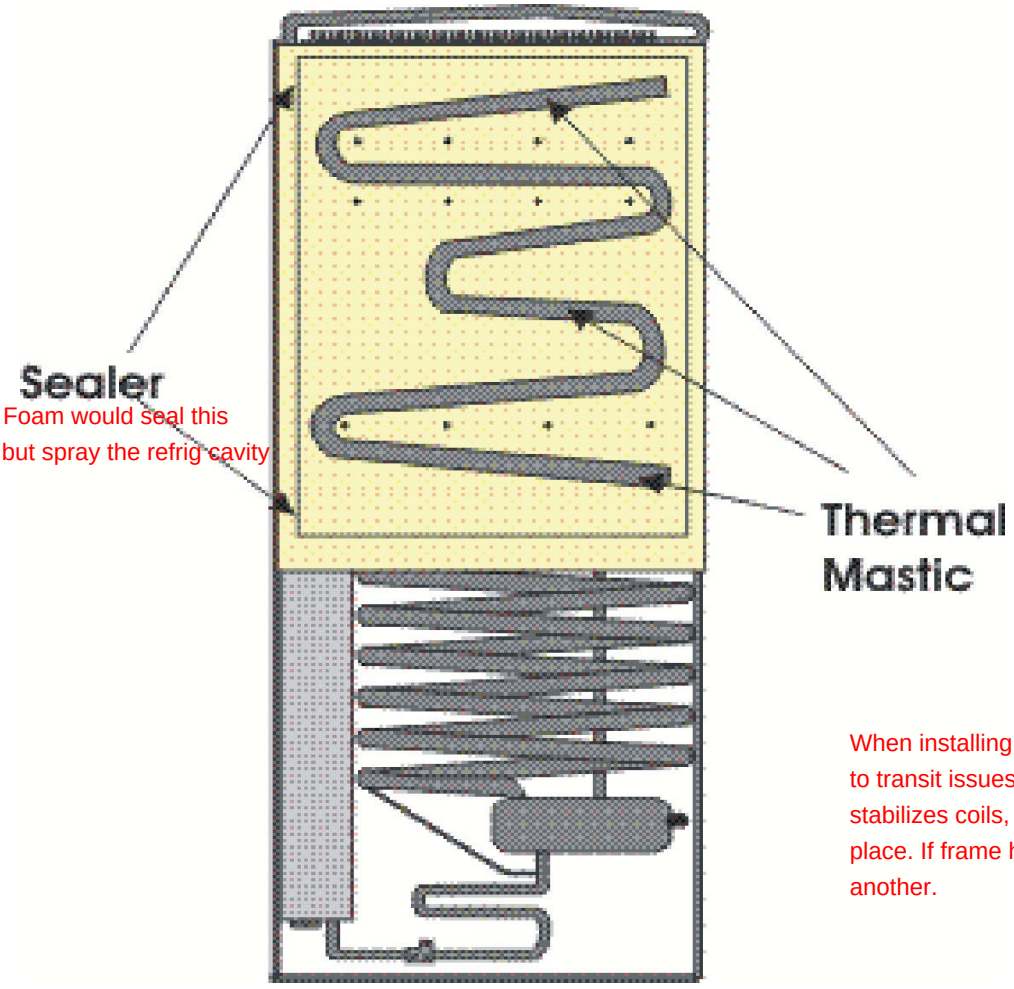
Before sealing the edges of the foam block of the cooling unit and permanently installing it into the refrigerator, it's a good idea to place the cooling unit into the refrigerator to see how well it fits. Sometimes the foam block is too big and needs to be trimmed. Don't worry if you get carried away with trimming. The spray foam we send goes around the 4 side to seal. I would cut the backer away so you have clear view of the seam.
The first step in installing a cooling unit is to apply thermal mastic to the coils of the cooling unit that contact the aluminum fins and the freezer of the refrigerator. See graphic below.



attach the fins back once the thermal mastic has been applied. Do not try to attach the fins after the cooling unit is laid in place.

Never drill any new holes to mount cooling unit in ~~~

Once comfortable with the fit of the cooling unit, apply a 3/8" bead of mastic to the tubes on the face of the cooling unit, as shown in the graphic below. You apply a bead of the spray foam around the edge before the cooling unit is set in place. The bead of sealer along the edge of the foam block should spread along the edge when the unit is placed into the box. If you need to use more sealer just remember it is for air sealing not bonding. Now, since the seam is clear to see if needed place a bead of spray foam in the center of the seam around all 4 sides. Let it cure enough to trim smooth and use the foil back tape to cover. Make sure not leave open spots for air leaks.



When installing unit an the frame is bent up due to transit issues, no big deal. Frame only stabilizes coils, freezer screws hold coils in place. If frame holes line up good, if not drill another.

Next, install the stabilizing screws for the cooling unit. Install all the peripherals that you had removed earlier (heat elements, baffle, burners etc.). Once everything on the back of the cooling unit has been installed, set the refrigerator upright. The Replace screws of the in the freezer area and to the fins in the lower box can be recheck to be tight. There are brackets for the screws below the surface of the foam. Tighten all the screws well. You should see the screws slightly pull the area around them inward. **Failure to tighten the screws will cause cooling problems.** Reinstall the thermistor to the right fins in the lower box with the tip about 3/4 inch for the top.

Installing the Refrigerator: Install the refrigerator back into the RV and make the necessary connections for the electrical and gas. Look back at the safety issues mentioned at the top of this page before continuing. **Test for propane leaks** at the connections you have made and all gas parts on the refrigerator. The refrigerator should set upright a few minutes before being put into operation. **Always test the refrigerator on 120 volt first,** only because there are less variables on the electrical side than on propane. You should see signs of cooling in the freezer in an hour or hour and a half, and an empty box should come down to temperature in six to eight hours.

Dometic
refrig get the numbers off the tank so we will know which cooling unit you have. Dometic made different style cooling unit for the same model number. With the confirmed model and the tank number we can get the correct unit. If the number is unreadable when ask for the mounting bracket kit or email for a picture
of the 2 styles, so your ordered style cooling unit will fit correct…This mount bracket
kit is sent with the new cooling unit at no charge…

