

Dometic SXS 1292 1282 1492 7732 7832 7130 7030

HVAC DC 12V with universal controller



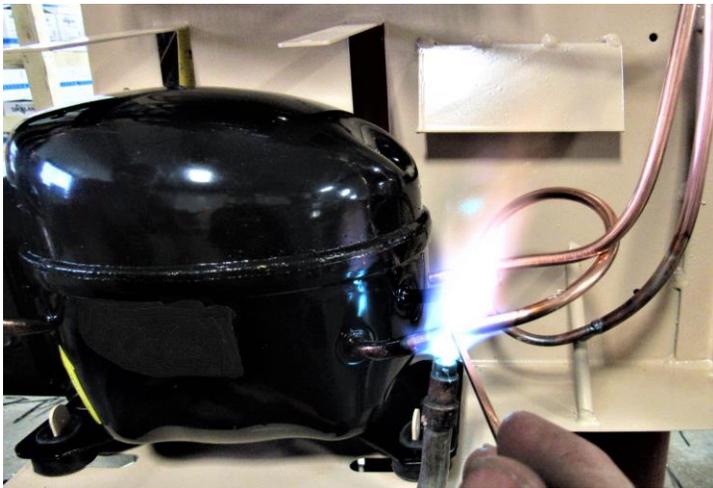
Jr-Jeremy & Aaron Lambright

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Good Day Friends, this is how it all begins, hope you find this helpful thru your installation.



Units prepped for compressors



Brazed welded for strength



**Individually
tested**

Tools needed to do the install:

Screw gun 5/16 ¼ Phillips wrench putty knife knife caulk gun zip ties Channel Lock



1 or 2

And enough time to think things thru at times, so don't give up and hang in there to the end it will be all worth it. A cold fridge is about to be had!!



We at JC Refrigeration try to build these as easy to install as possible, and so these are DIY cooling units but please be aware though that our upgrades might not look quite the same, and brackets, frames, hole plates might not always line up perfectly as fridge boxes can vary at times, and so some modifications, foam shaving or tweaking might need to be done at times to install it. A thing to remember is these are made out of thick steel tube and plates so some twisting or pushing into place is very normal and nothing to be alarmed about. We offer videos for the gas/elect and install manuals for the Hvac units to help you thru this install and feel free to send us a picture along with your question, and we will help you to the best of our ability.

JR & Jeremy Lambright

Please read through these notes before starting:

- Throughout this manual, there will times when you see (RA), (YA), or (BA). These are referring to red arrow, yellow arrow, and blue arrow. We use these to point to a certain spot or part in the pictures.
- There are some differences between this install manual and the install videos on our website because the videos are for the gas/electric cooling units. So, to avoid confusion, follow **only** the instructions in this manual.
- With this 12V dual compressor cooling unit, you will most likely need to run a new wire from the house batteries to the back of the fridge. Most manufacturers use 12awg or 14awg wire to supply 12V to the fridge. Depending on the distance between the batteries and the fridge, this existing wire might not be big enough to handle the load of the compressors. To know for sure if you will need a new wire, you have to install the new cooling unit and push the fridge back into the cabinet. Then hook it up with the existing 12V wire and turn the fridge on. If it only runs for a couple seconds and then shuts back down, and then keeps repeating that cycle, you will need a new wire. We recommend using a 10awg wire and hook it directly to the batteries. Make sure to install a 30-amp fuse/breaker by the batteries for the new fridge wire.
- Being that you are installing the Universal controller, your icemaker will no longer work in freezing temps. As the 12V heater that wraps around the icemaker water line has no place to get the required power, however the icemaker itself is powered by 120V which is completely separate from the rest of this unit and we highly recommend to take pics of this hook up before taking anything apart so you know how to put back together if you plan to keep it.
- Remember your old rear or front control boards will no longer be used, they can be taken completely out or just left in and not used. Same with wires and fans, what you take off will no longer be used but can be saved for future use if needed or discarded.

To start this process, begin by taking the cooling unit out of the box, if box appears to be damaged don't panic as we foam package them into the box (YA) and so the box can be practically destroyed and the unit is still not damaged. So, when you take the box apart you will notice a spray foam packing inside and so this needs to be removed and then the unit will slide out. Inside the box you will have the cooling unit, and parts needed to do the install (RA).



Cover up your floor with blankets and removing any door handles or smoke alarms that might hinder the exit of your refrigerator from your cabinet. Turn off the water pump (if you have an ice maker in your fridge) and the refrigerator control panel.



WARNING:

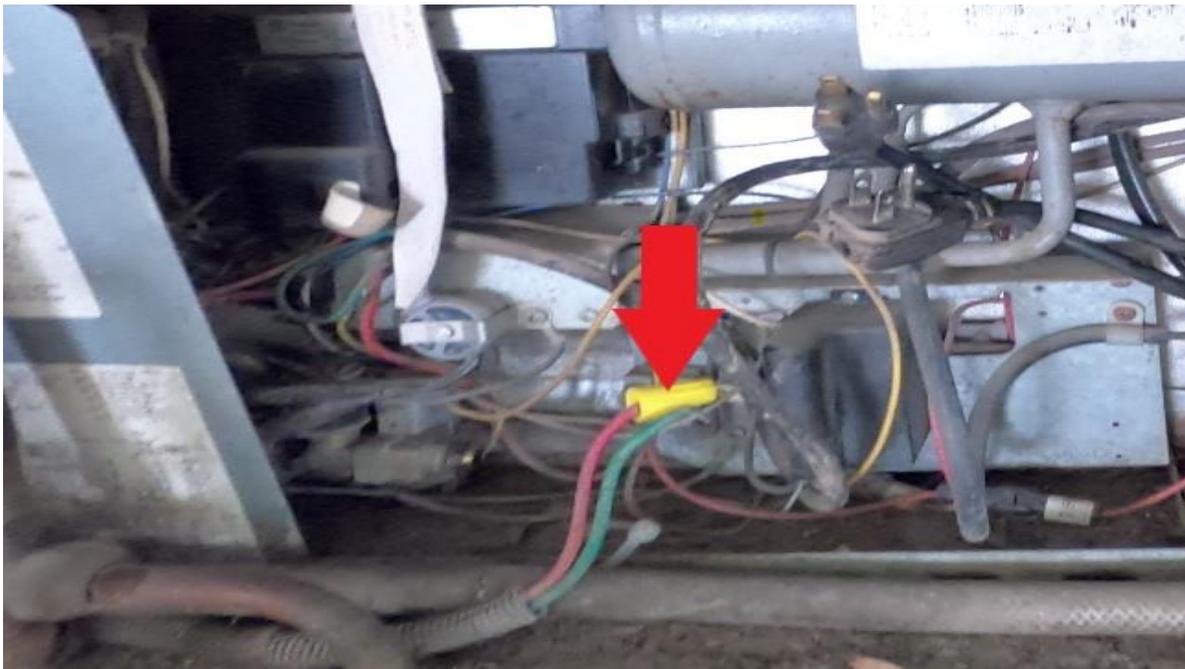
Make sure to turn off LP gas at the tank before starting the install.



Locate your refrigerator side vent on the outside of your RV. Using a flathead screwdriver, loosen the 12v wires (**RA**). Remember which wire is positive



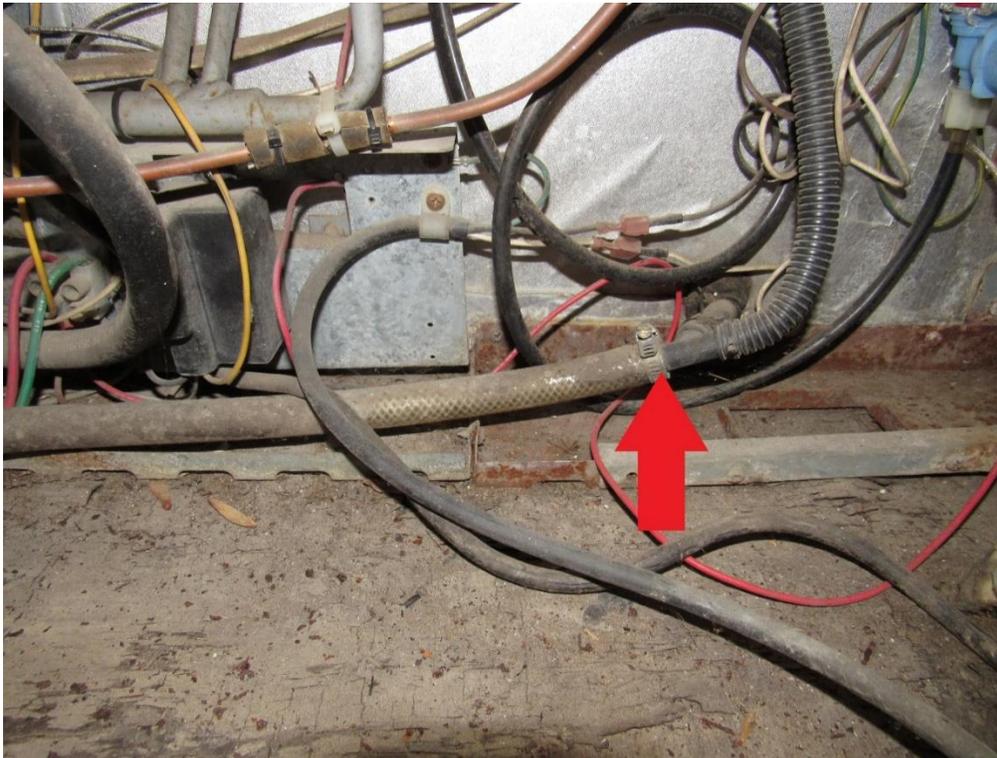
The color of the wires will vary but the 12V positive wire (**RA**) is always on the left and the 12v negative wire is on the right. Wires are not insulated so you will need to put a piece of tape or a twist cap on the 12V positive side (**RA**).



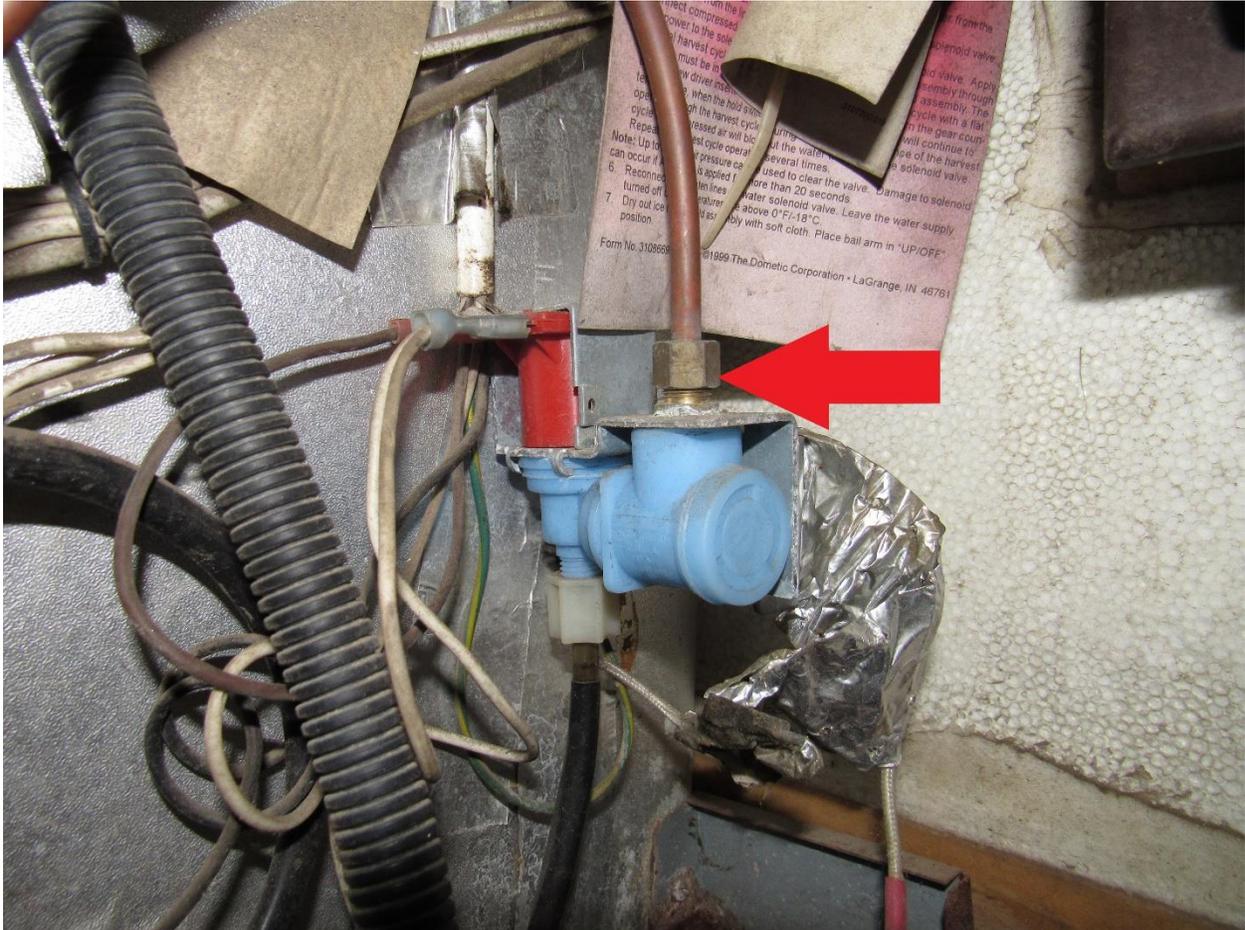
Remove the 120v plugs from the wall outlet (RA). One of these is your icemaker 120V plug in so you will want to follow this back to the fridge and take pics of this hook up for later use



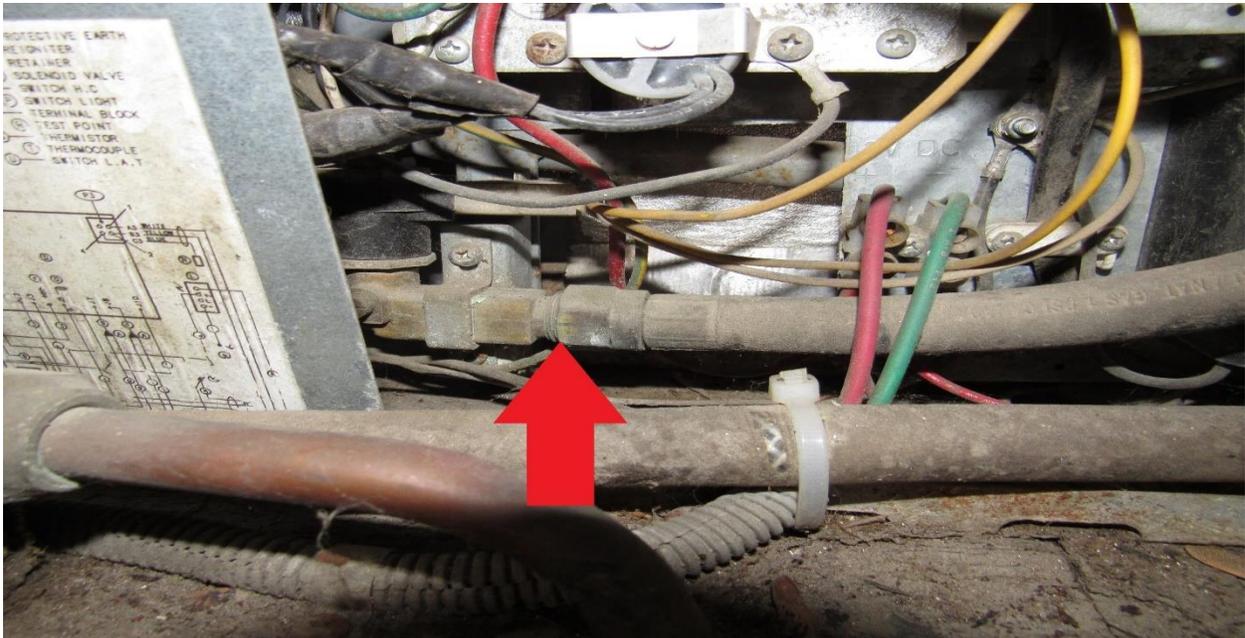
Remove defrost hose from the "T" (RA). Placement could vary.



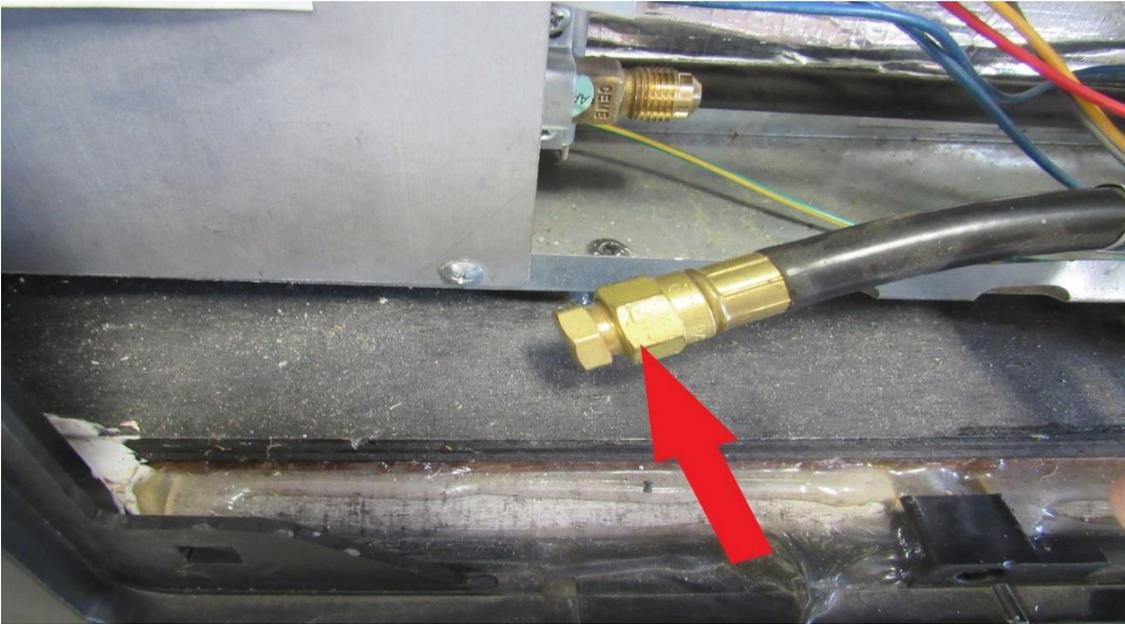
Turn water pump off, remove water supply line from the ice maker valve (RA).



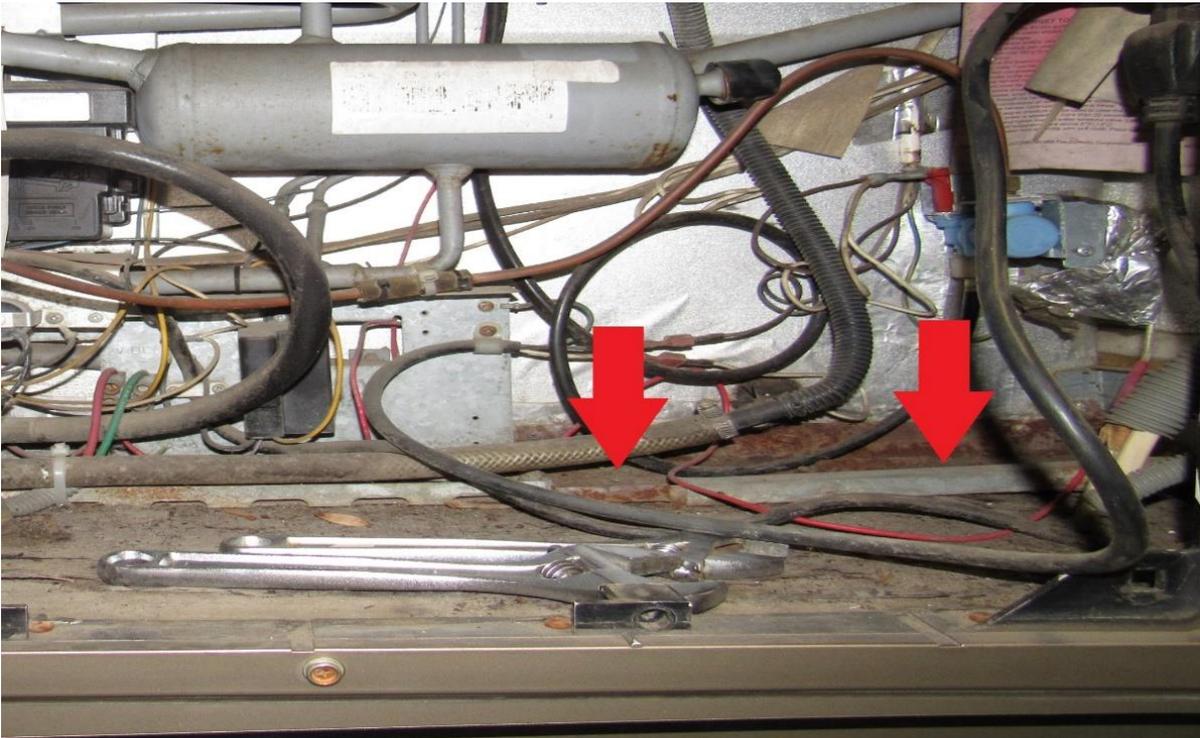
Make sure your LP gas off. Remove the LP gas line from the solenoid (RA).



Cap off the LP line with the supplied cap in the parts bag (RA). Check this joint with soap and water once gas has been turned back on.



Remove the mounting screws (RA). Placement and size screw can vary.



Remove top mounting screws (RA). It's a good idea to place all loose screws in a bin as you will need these later.



Remove two top mounting screws (RA).



Secure the top control panel again with the two screws to hold in place (RA).



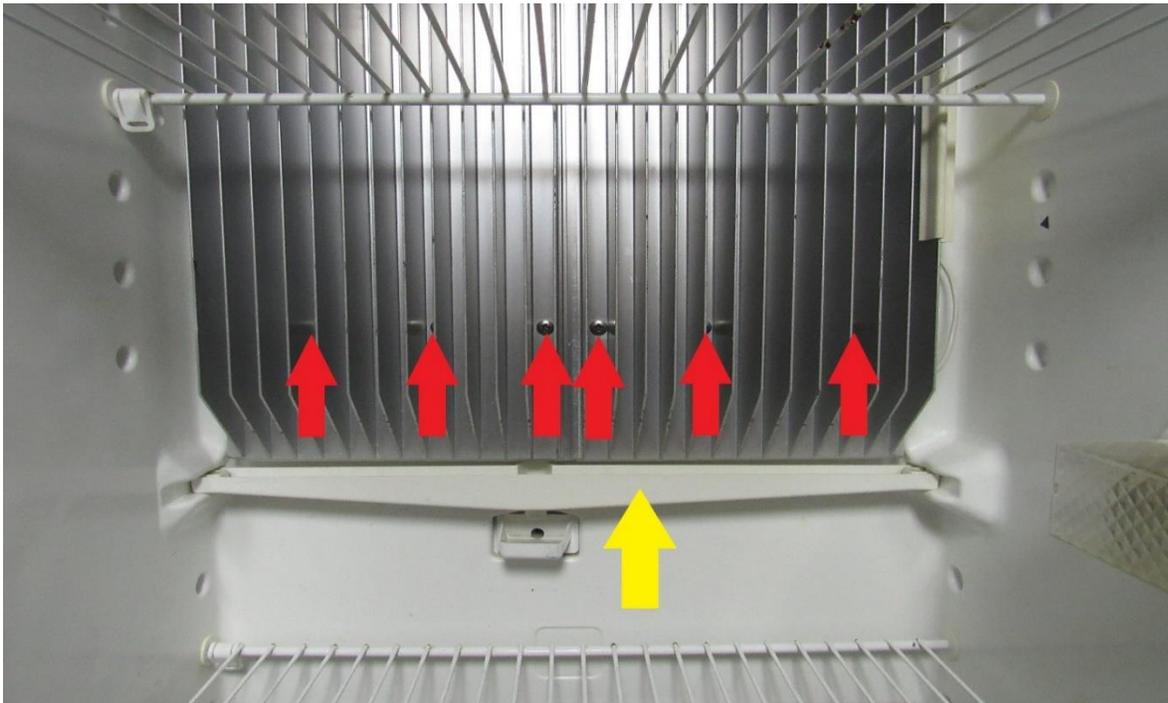
Remove the two bottom mounting screws (RA).



Unclip the shelf holders (RA) and remove shelf that's in front of fin.



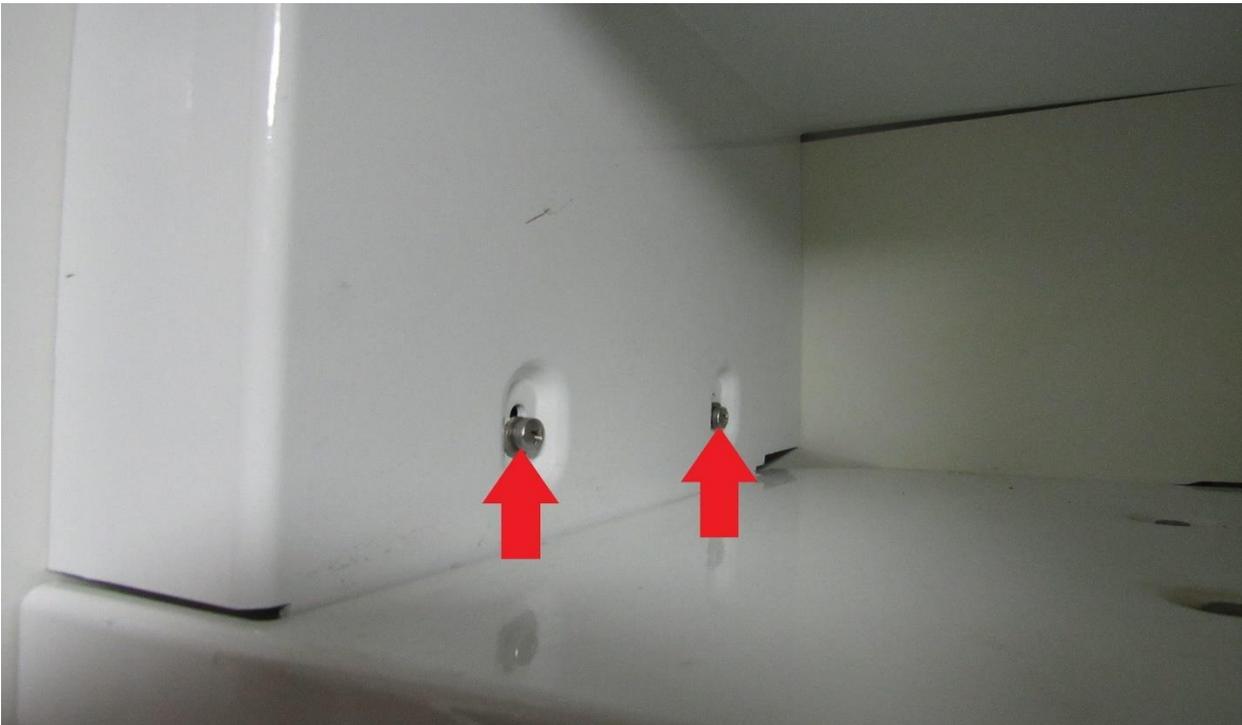
Remove the fin mounting screws (RA). Slide the defrost tray out (YA) and lay it aside until later.



Remove the top plate mounting screws in freezer (RA).



Remove the side plate mounting screws in freezer (RA).



Remove the two mounting bolts on bottom plate (5/16 socket) (**RA**).



Remove the six mounting screws on side plate (**RA**). Remove the plastic piece (**YA**) and lay it aside for later.

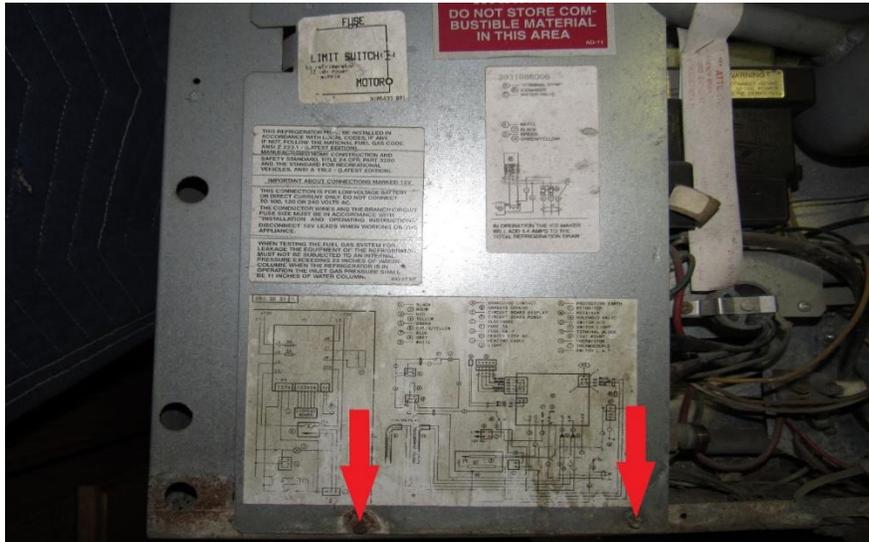


Remove door handles (**RA**). We do not show doors being taken off, but they can be taken off if this would be a better option for you.

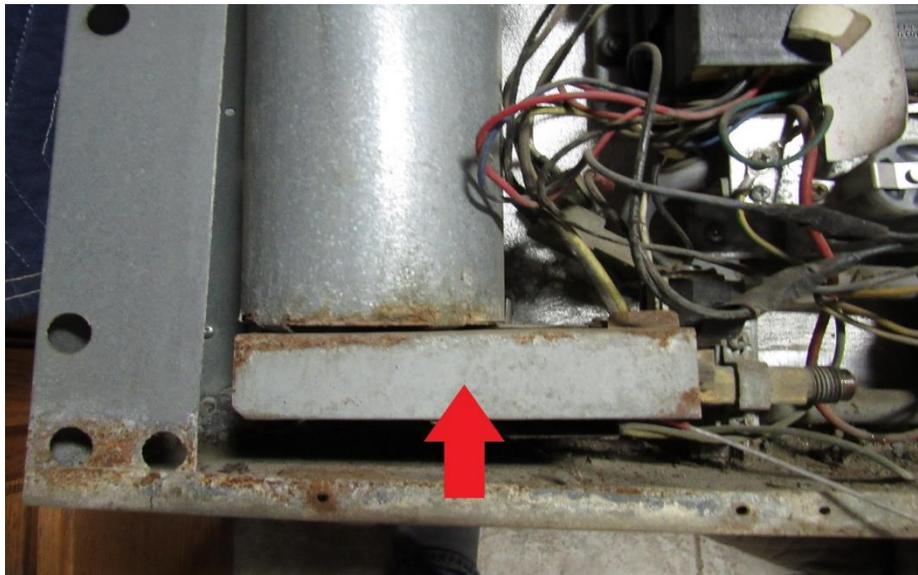


We do not show the fridge being slid out onto the floor, as the lay out of the coaches vary greatly and so it could be misleading to your scenario. But the object is to have 1 guy on each side of the fridge and as your fridge starts to exit lift up gently so when the rear end of the fridge fully exits the cavity that it does not drop, but needs to be gently and carefully set on the floor and pushed or carried to your open floor area. Lay fridge face down on the floor, making sure doors are latched shut so they don't swing open and we normally put a pile of blankets on the floor by the top freezer door so the fridge is lying face down at an angle.

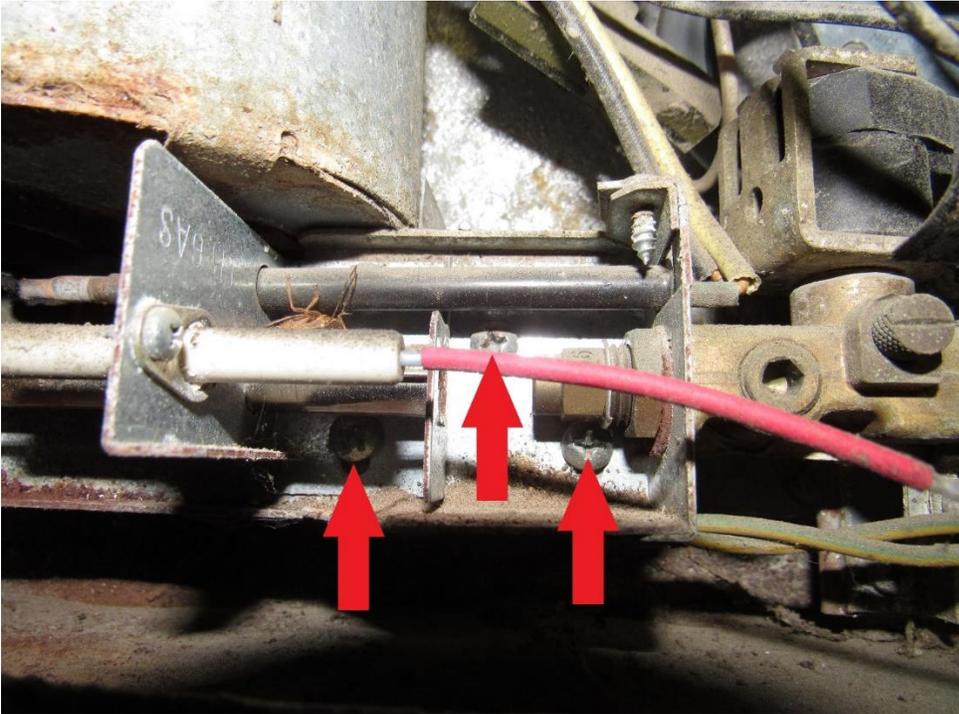
Remove burner plate mount screws (RA) and throw away.



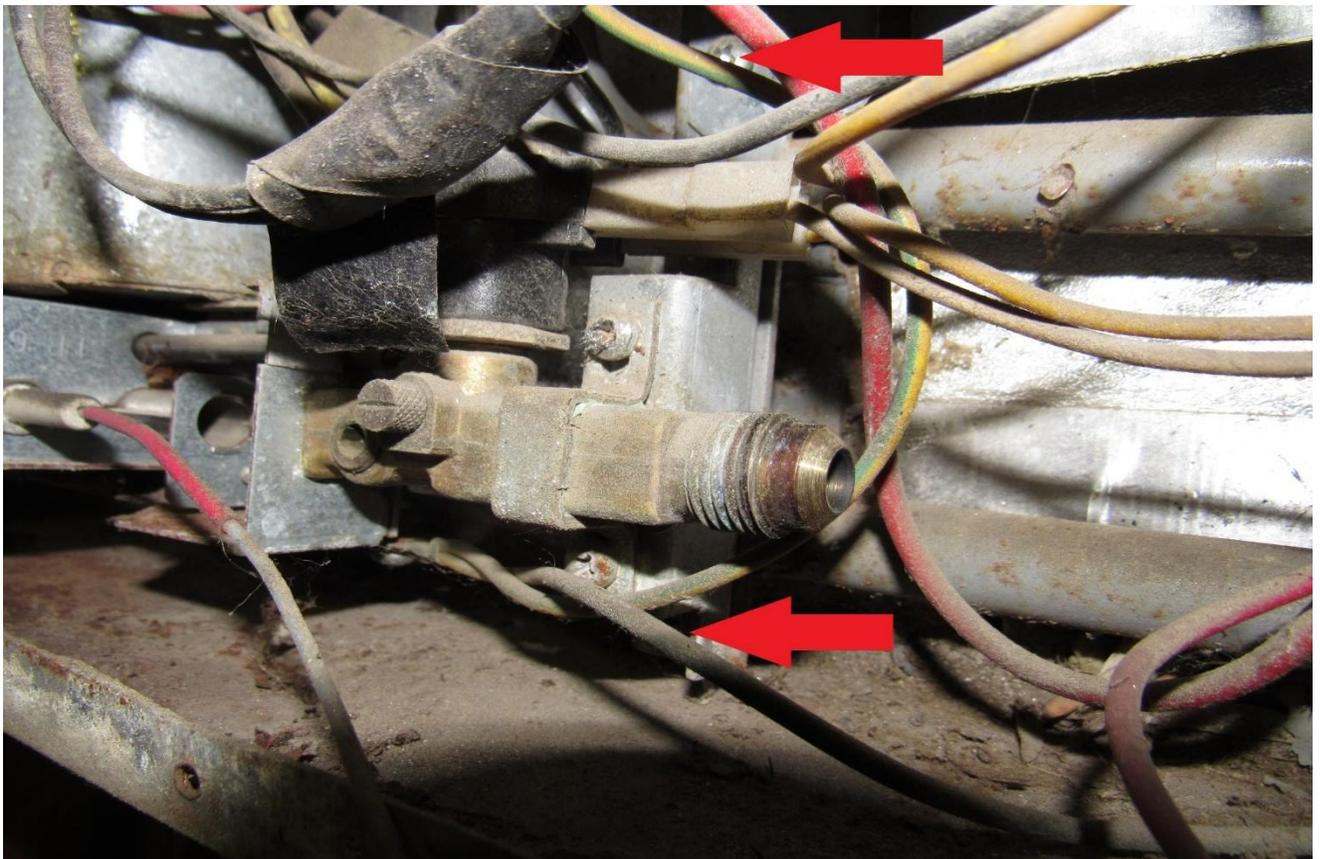
Remove burner cover (RA) and throw away.



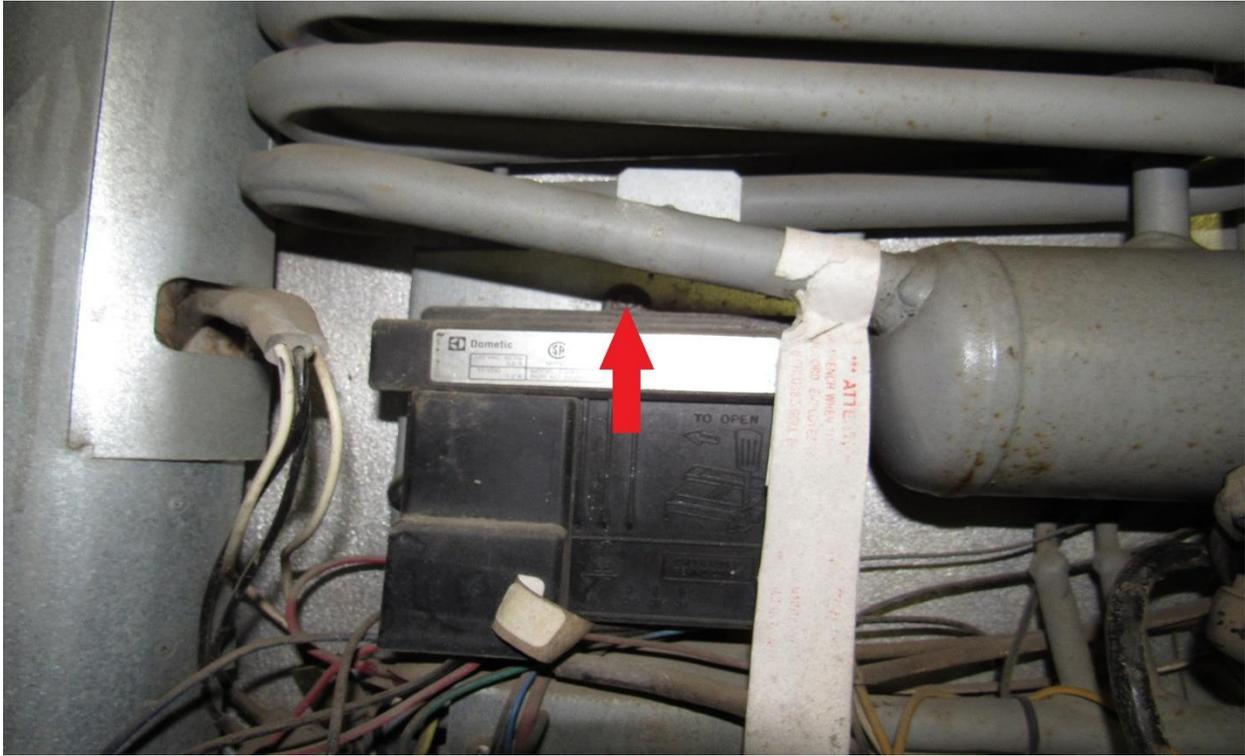
Remove the three burner mounting screws (RA).



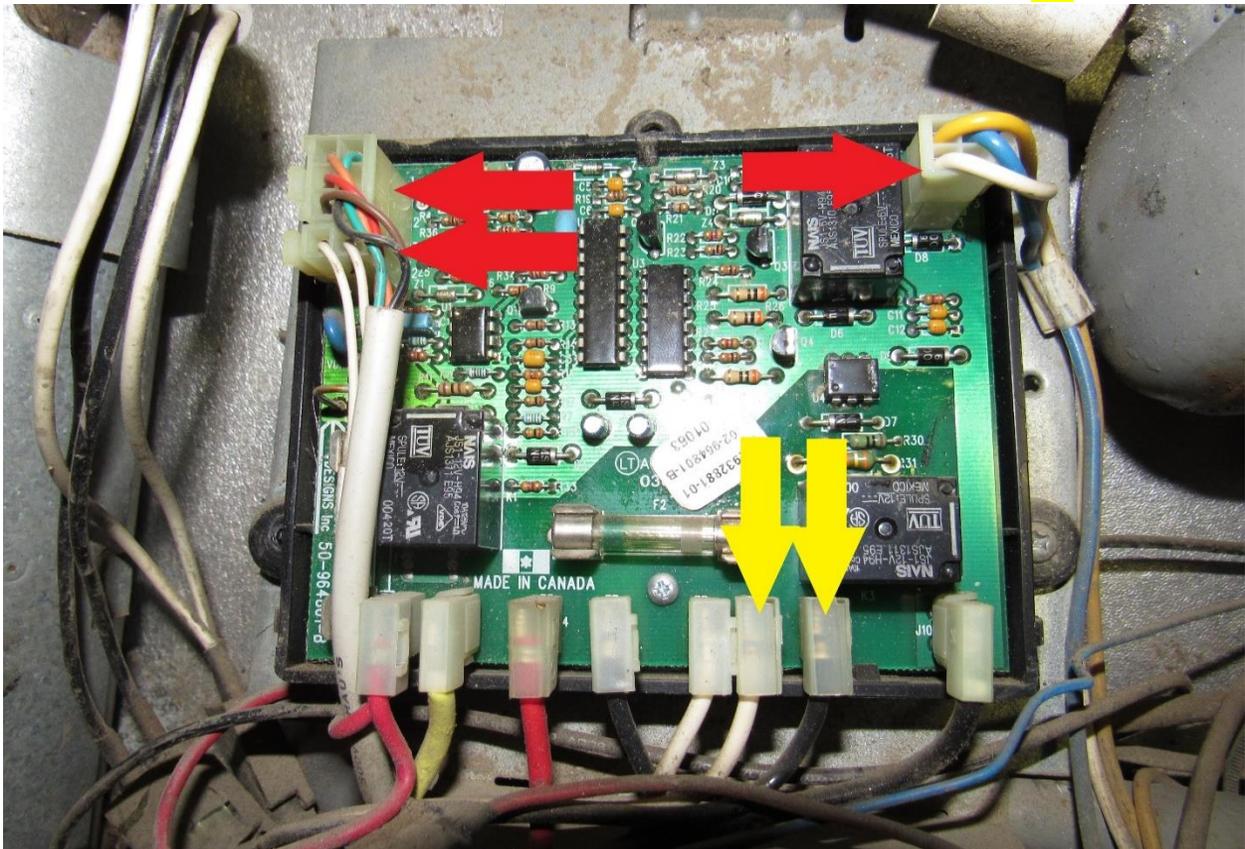
Remove two LP bracket mounting screws (RA).



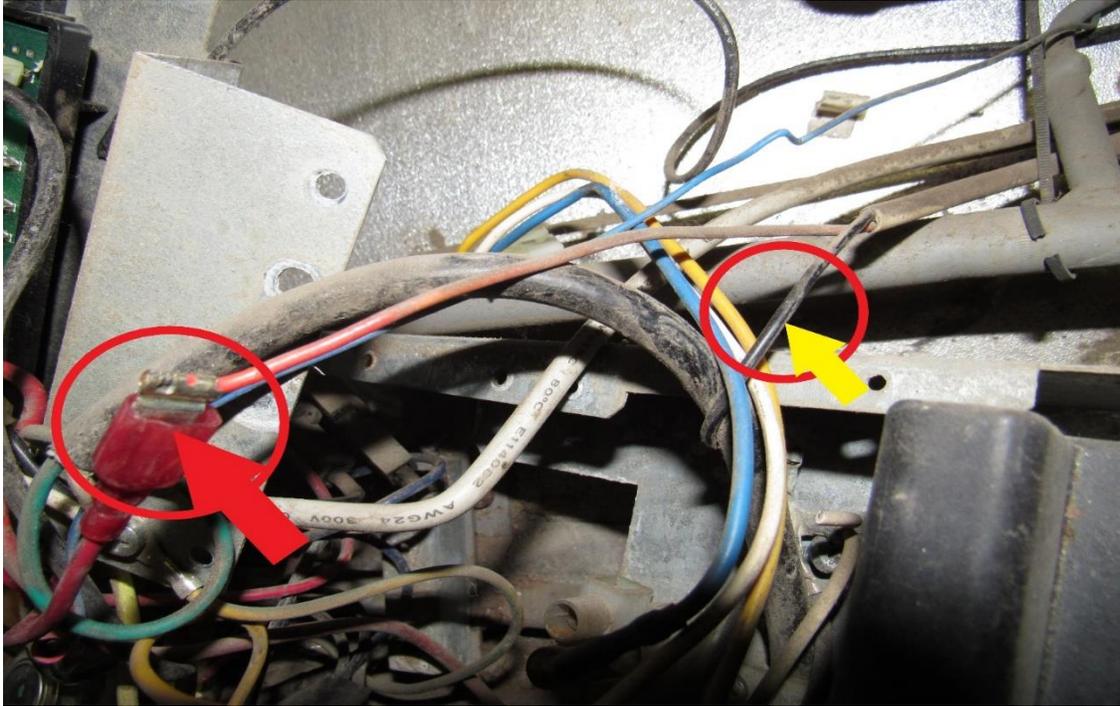
Remove board mounting screw (RA). This could vary some as Board styles vary.



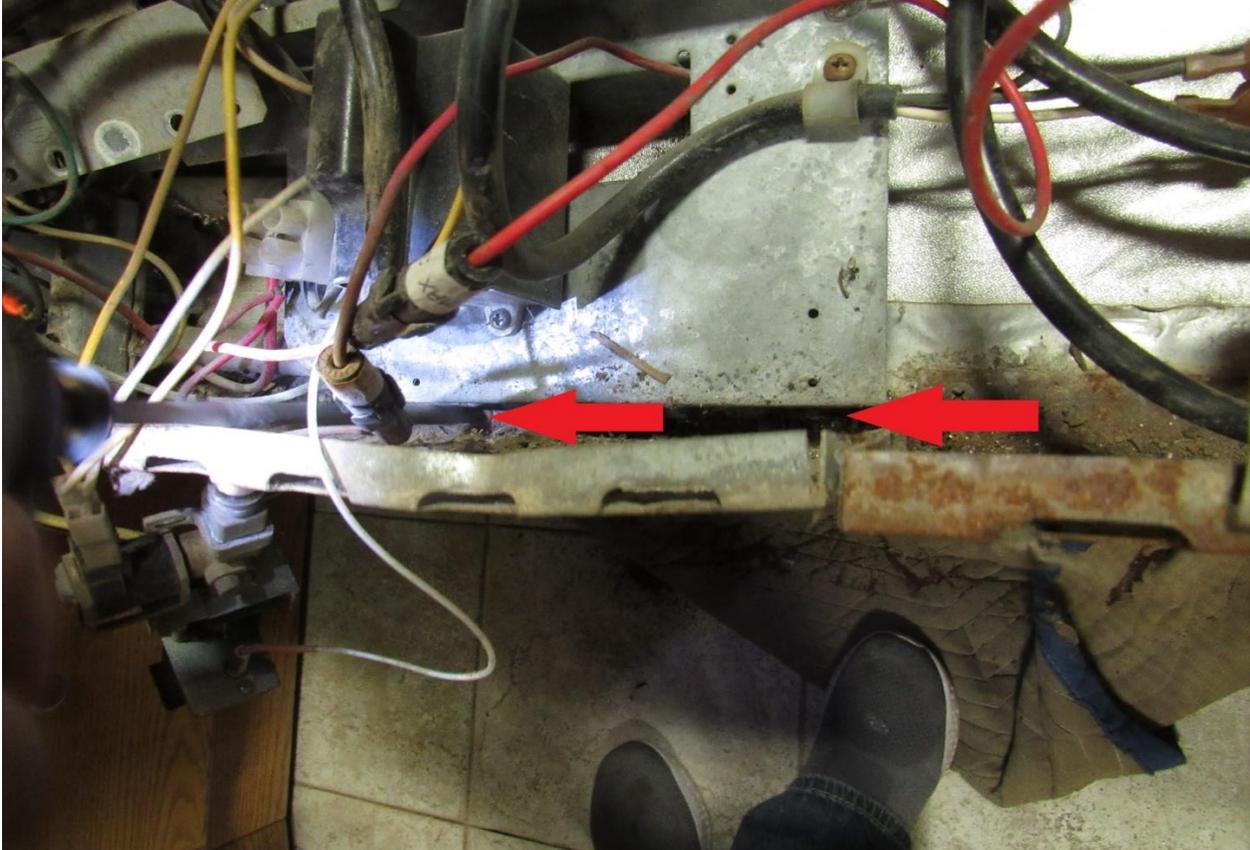
Remove three wire harness plugs (RA) and heating element wires (YA).



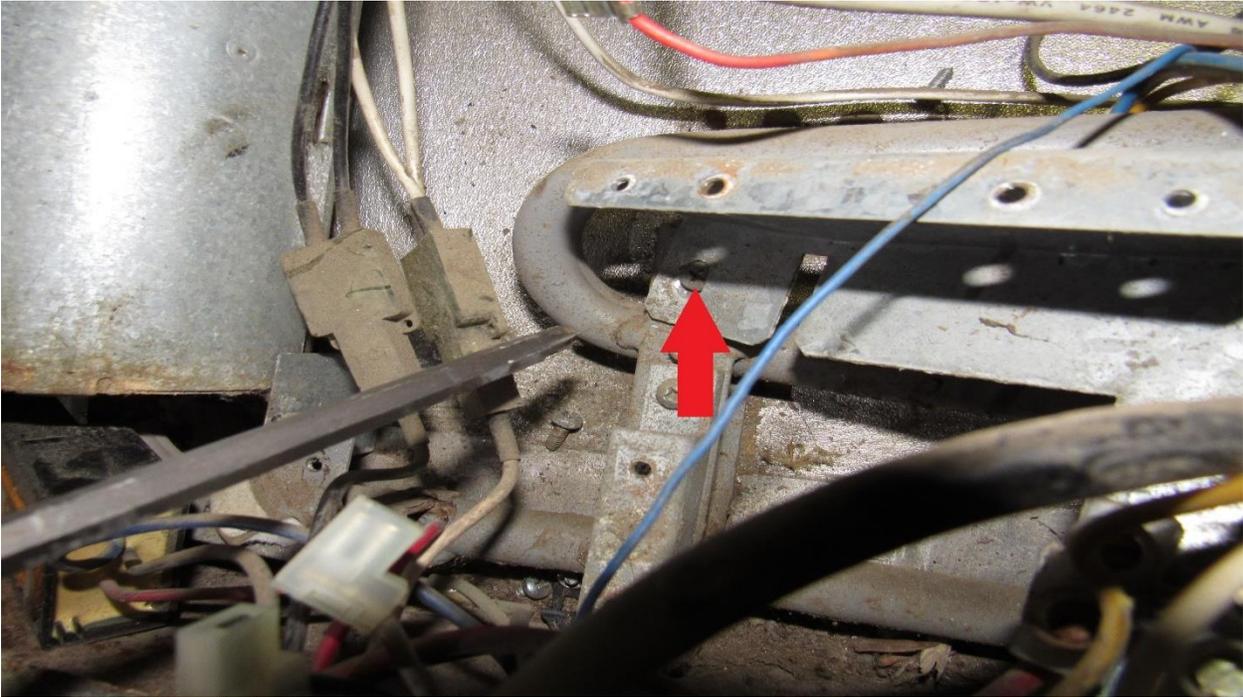
Disconnect red wire (RA) and cut the black ground wire (YA). This is your interior light wire, which will no longer be used



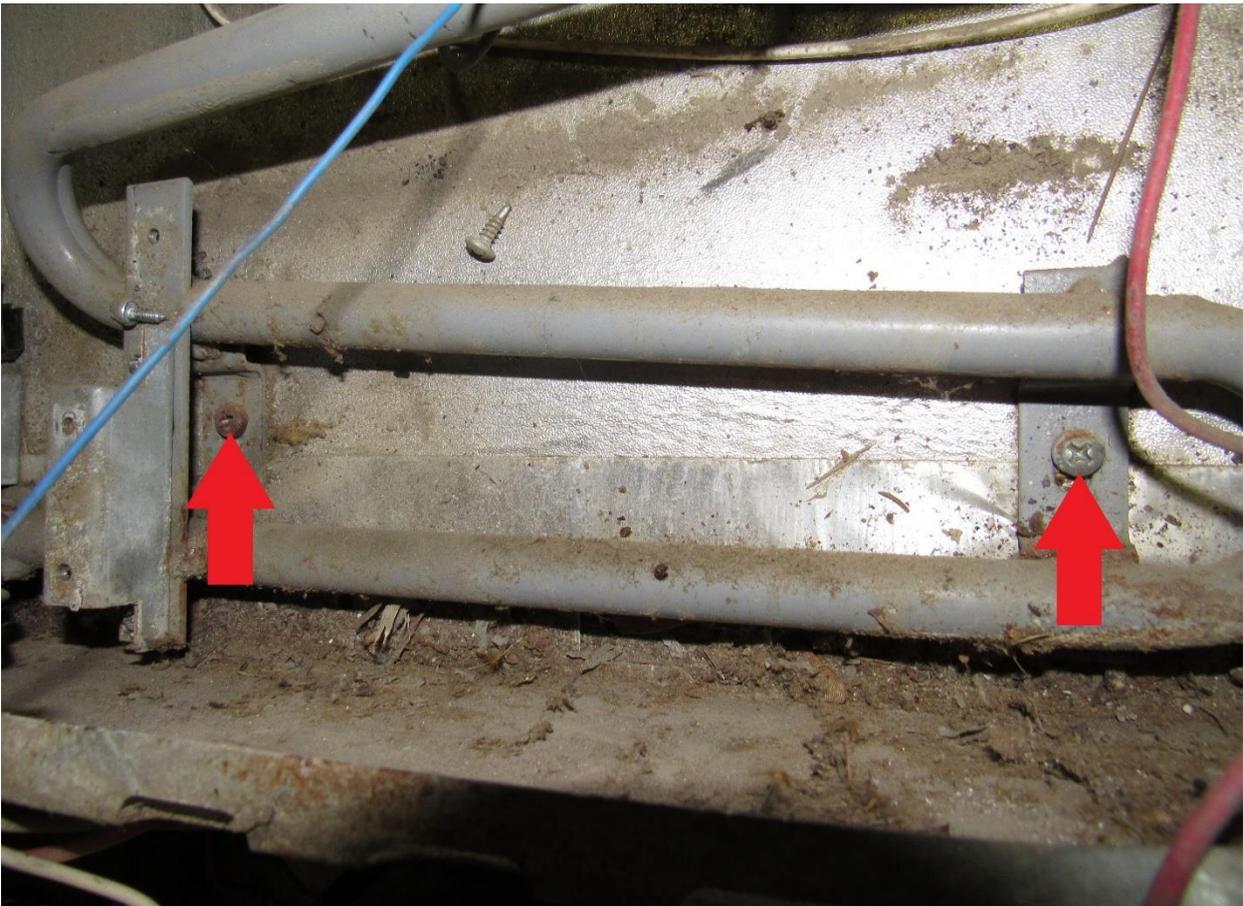
Remove the two plate mounting screws (RA).



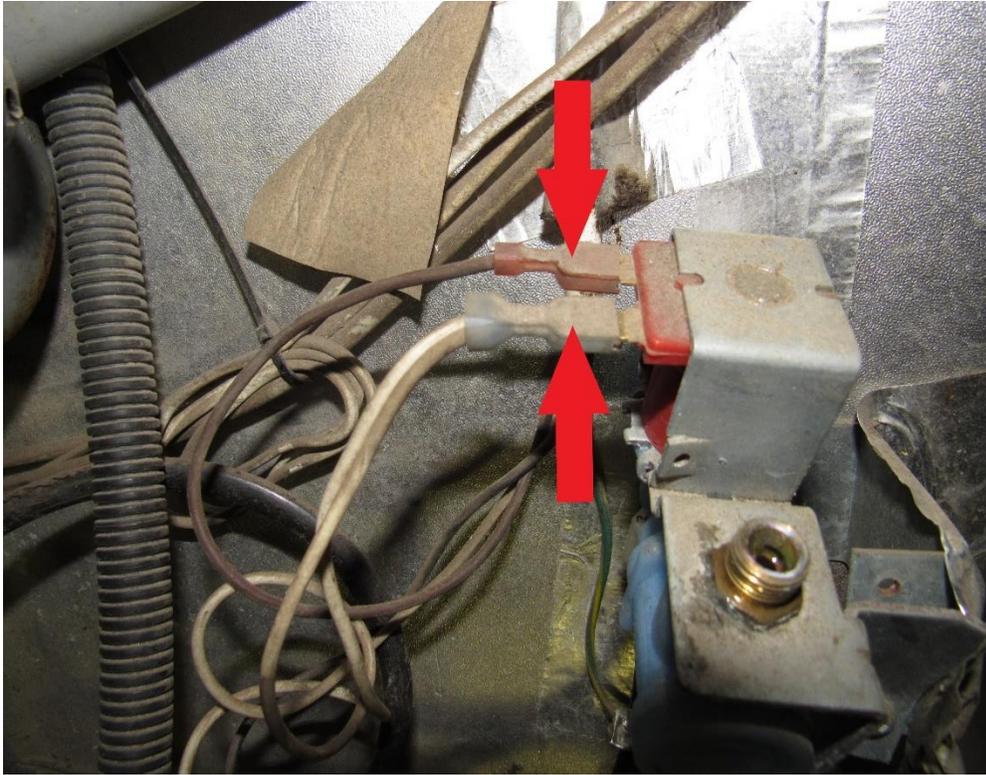
Remove the top plate mounting screw (RA).



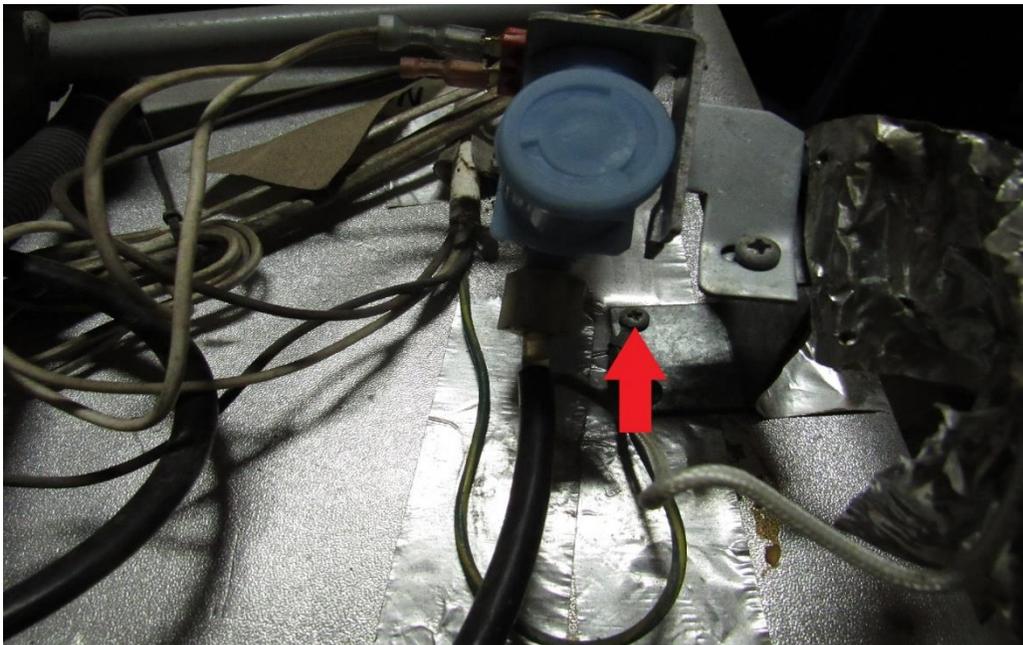
Remove these two mounting screws (RA).



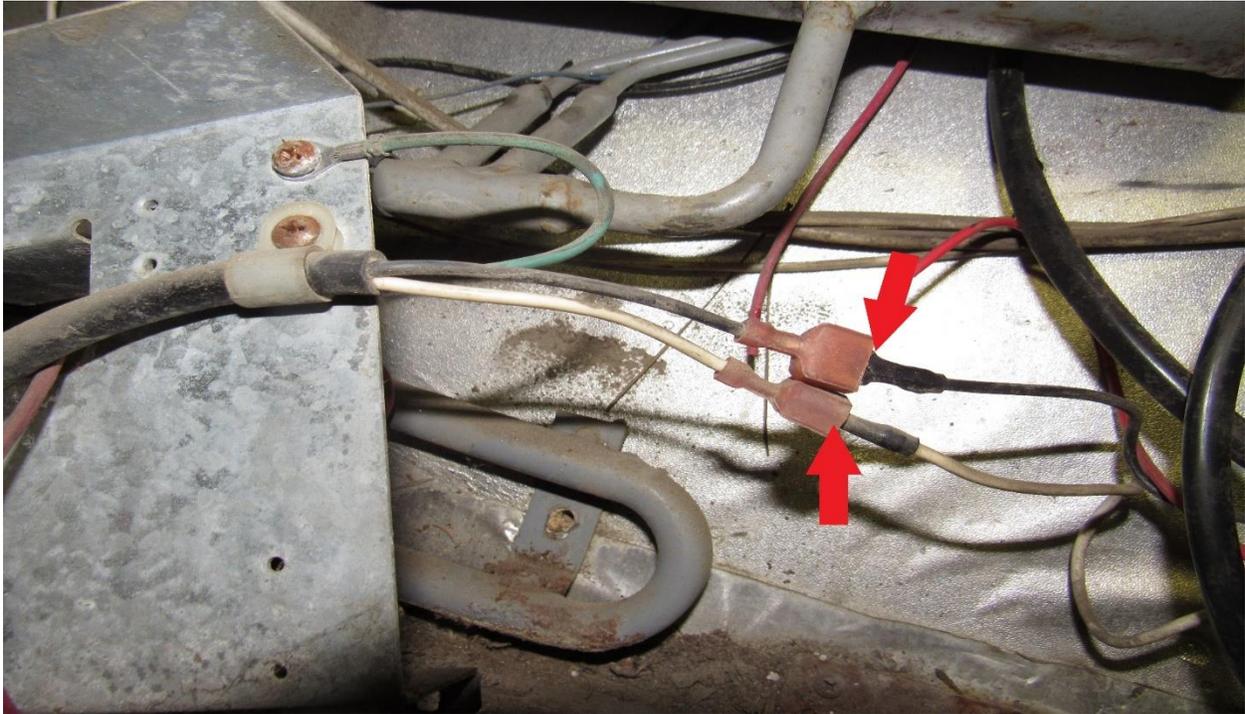
Remove white and brown ice maker wires (RA). If ice maker is being removed the following steps can be followed but ice maker parts and wiring can be thrown away.



Remove ice maker ground screw (RA).



Remove the 120v wires from ice maker cord (RA).



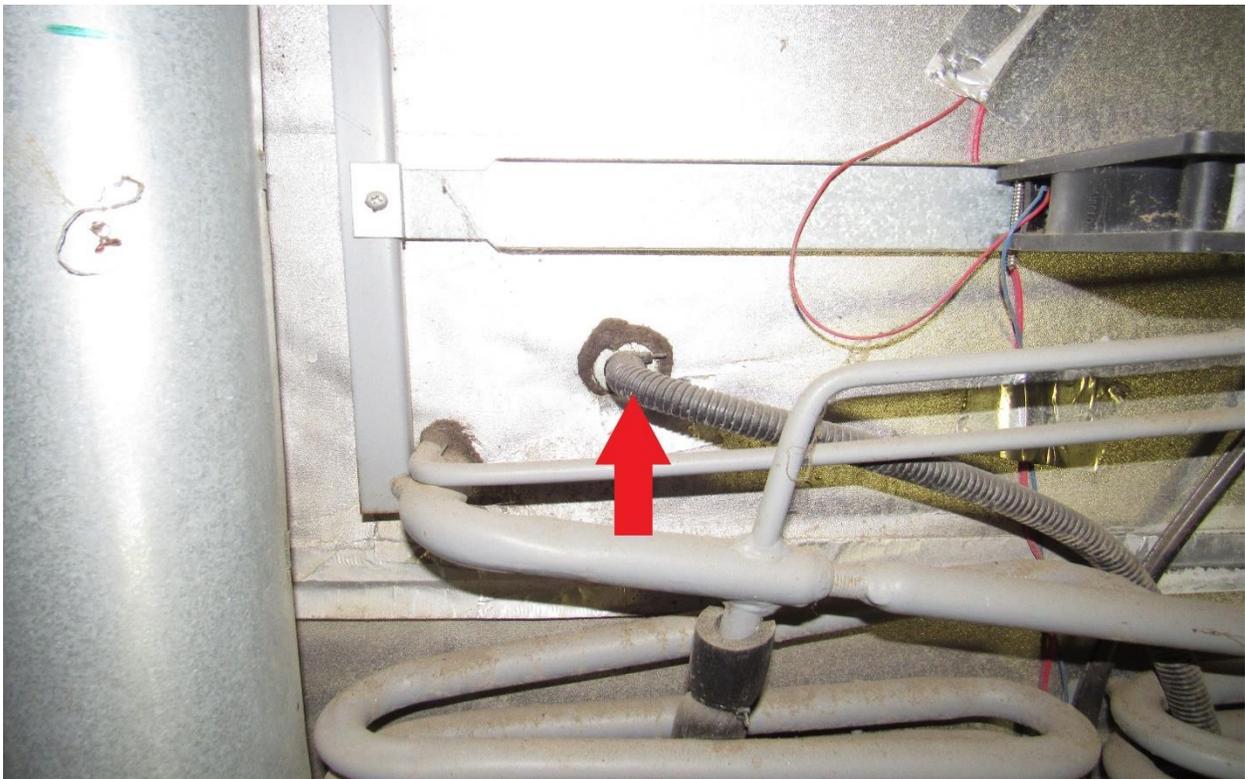
Remove the board and plates away from the unit. It should look like this.



Lift the bottom of the unit up and remove the main ground wire (**RA**).



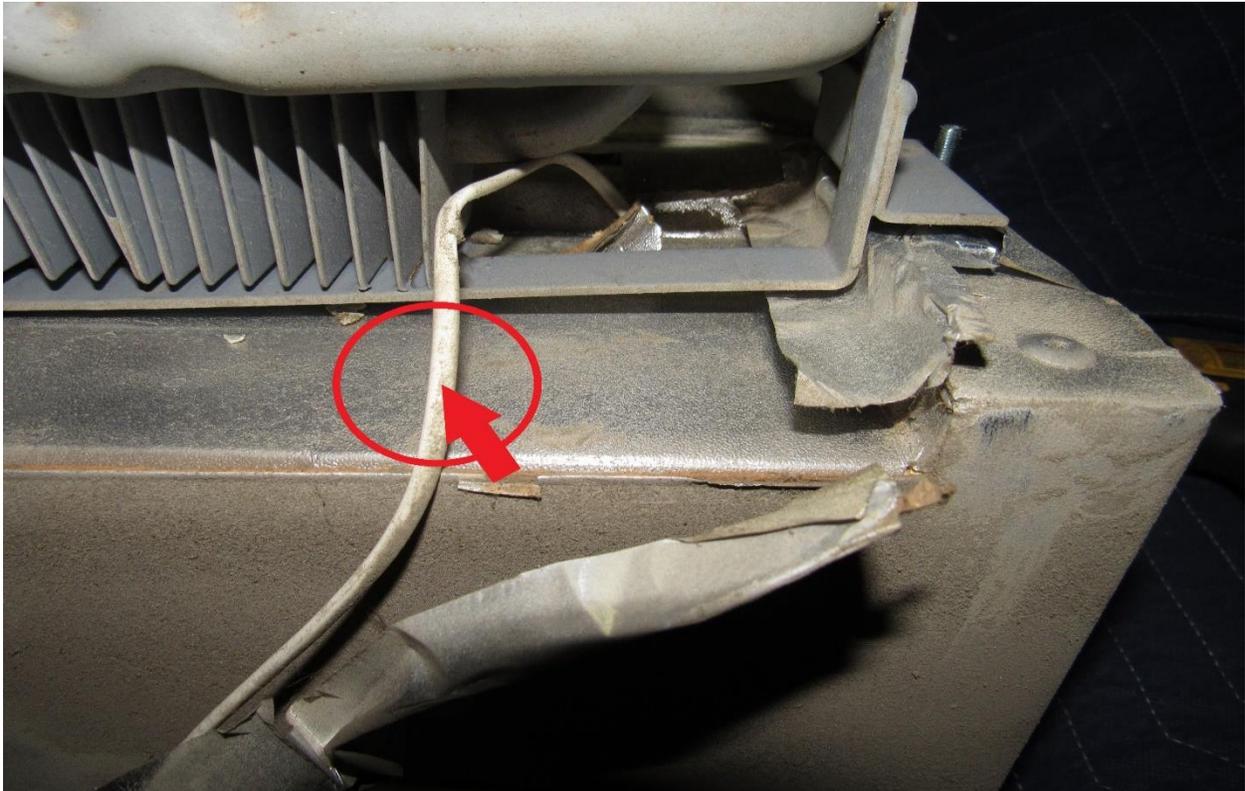
Remove the defrost tube (**RA**).



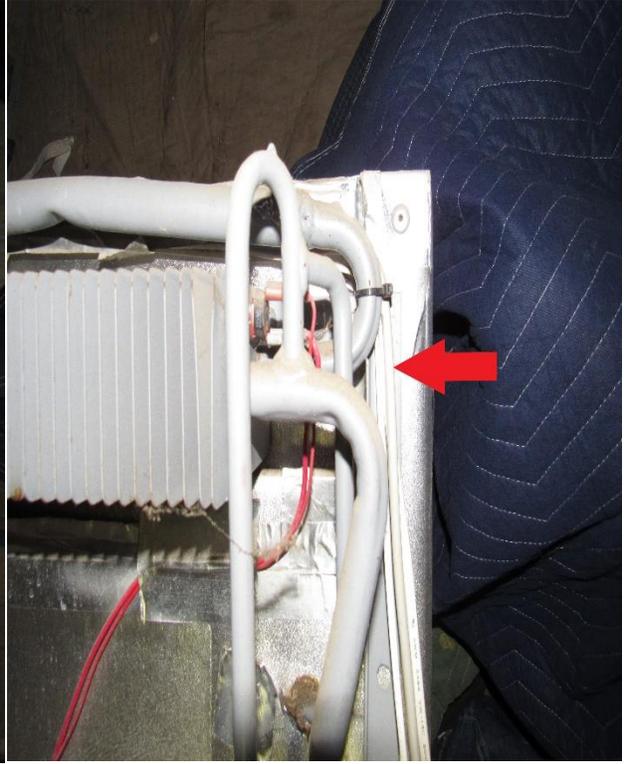
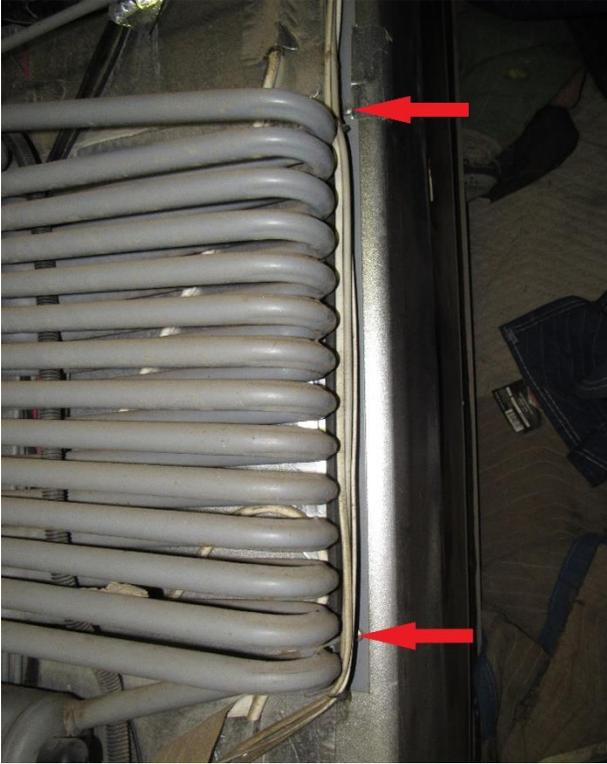
Remove wires from the temp switch (**RA**). Some models do not have this feature.



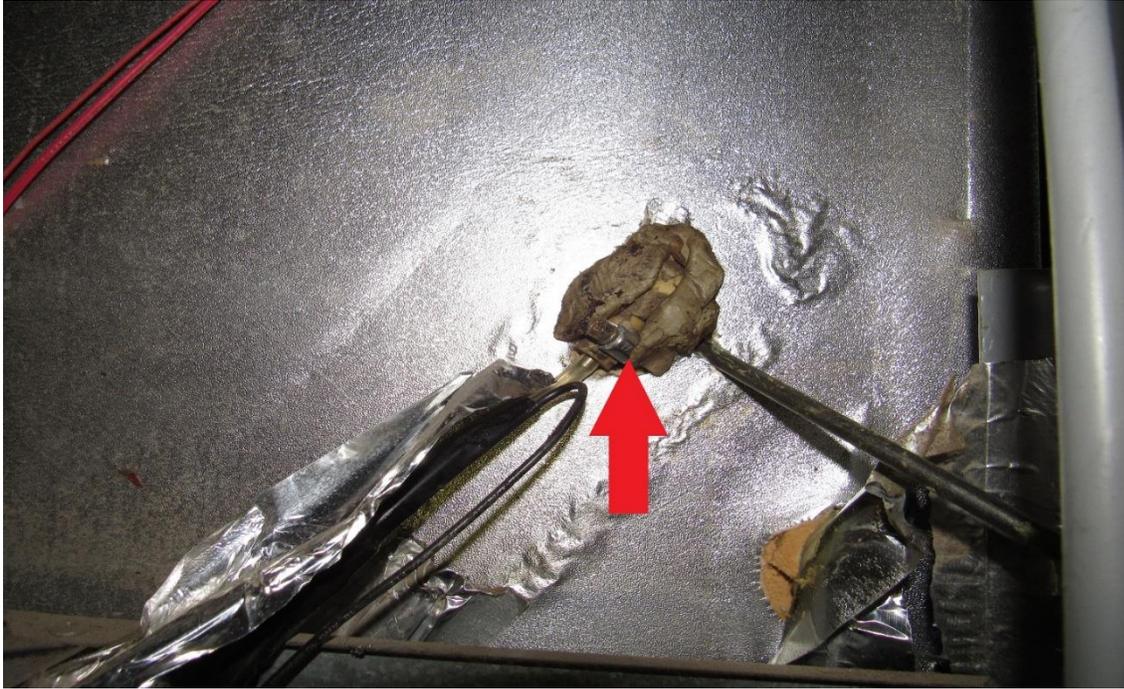
Untangle the thermistor wire from the unit as shown (**RA**). Otherwise, it might get caught on unit as you lift it out



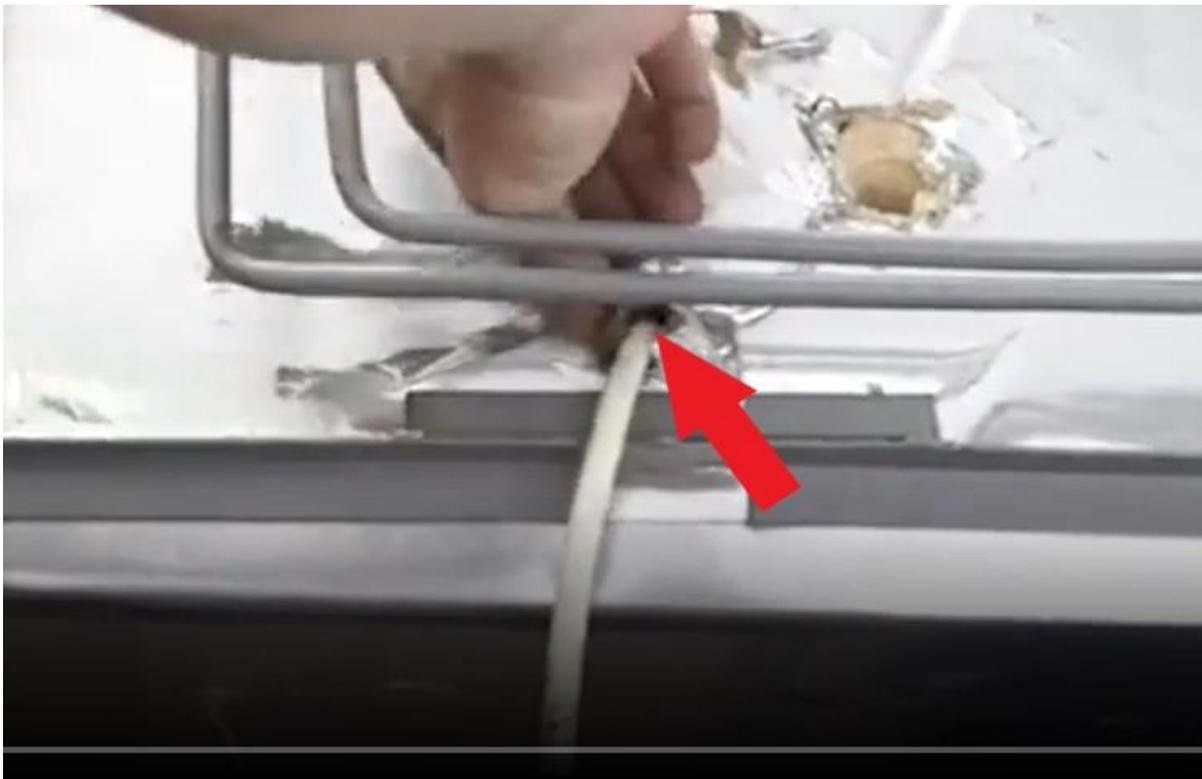
Remove side and top mounting screws (RA).



Remove water line spigot (RA) and feed water line to the bottom and swing it away from the unit.



Ice maker wires need to be fed thru the unit as it is lifted up so make sure all is loose and able to slide thru (RA).



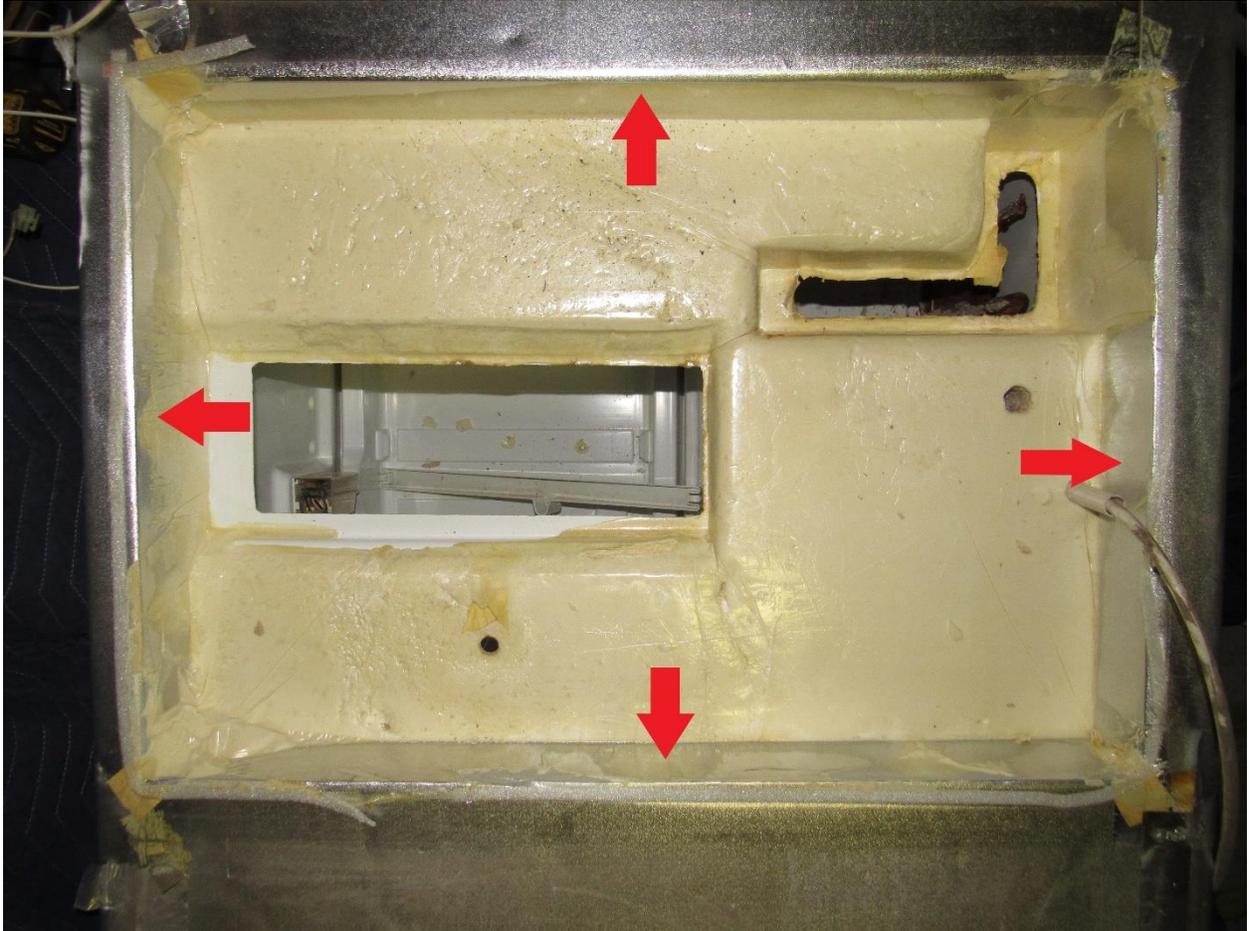
Lift unit straight up and out of box. This can be very tight as some of the older ones are really sealed in tight. Use a crow bar (**RA**) and a piece of steel (**YA**) for a backer to break the seal on the unit.



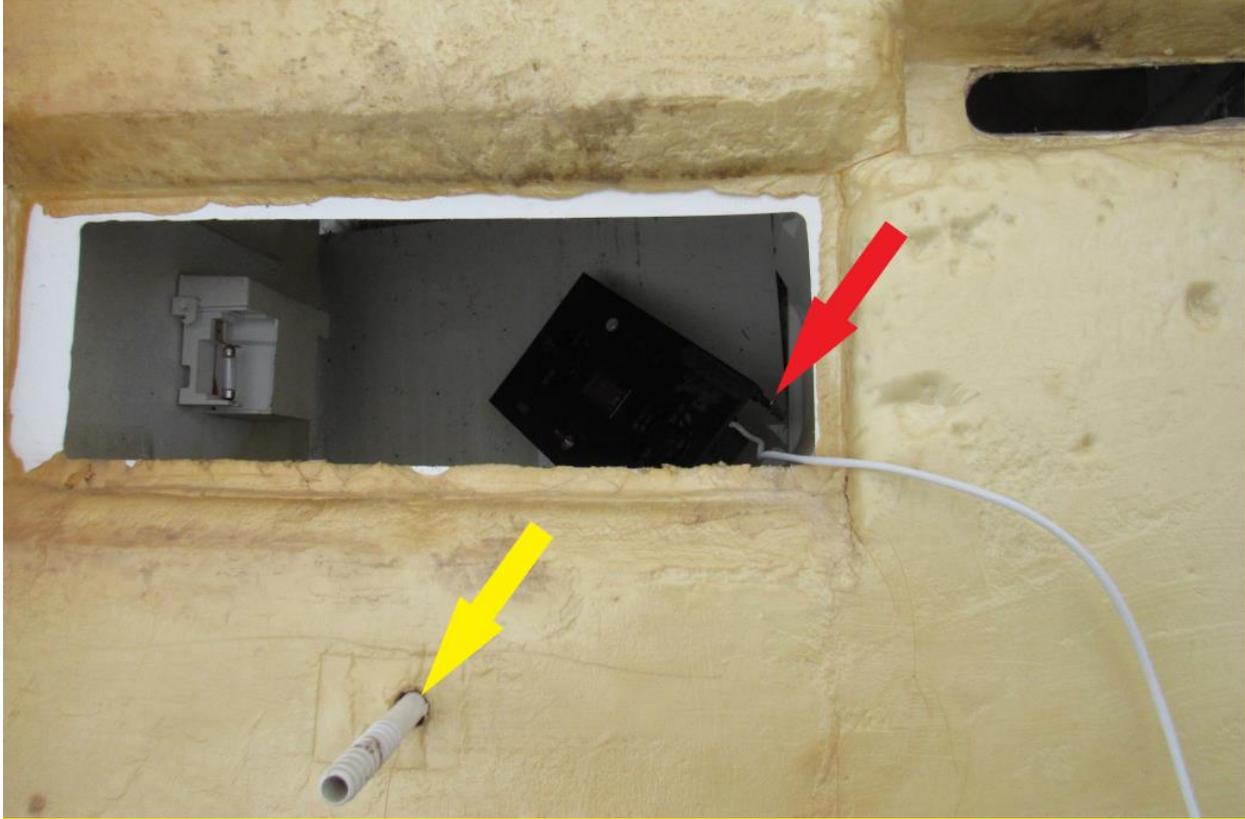
Remove the small angle plate where the LP burner was located (**RA**). Clean bottom of unit with a vacuum getting rid of all dust and rust.



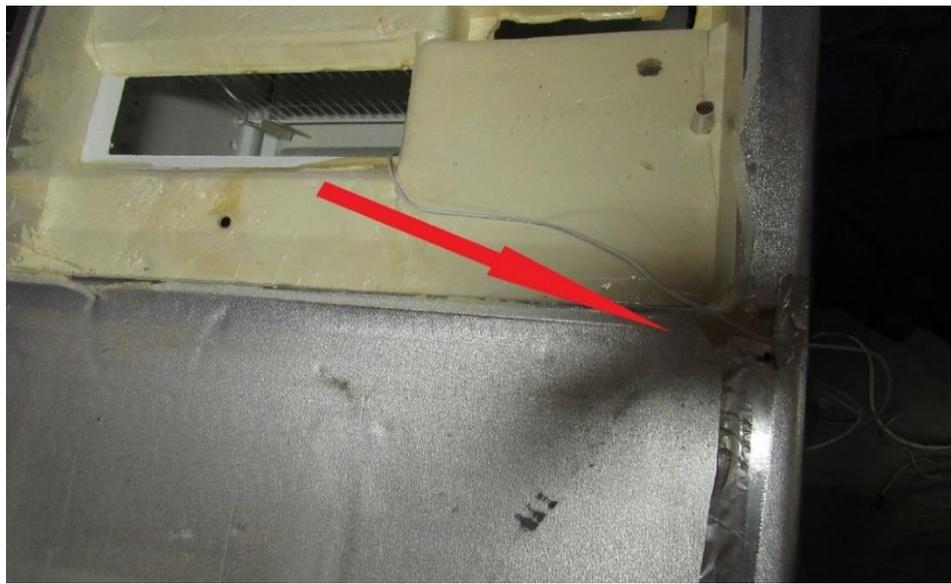
Clean foam and debris on all four sides, make sure all excess foam is removed, check corners as well (RA).



Insert the controller into the fridge box through the fin opening (RA) push the defrost cup spigot into the box so it does not break off when new unit is installed (YA)



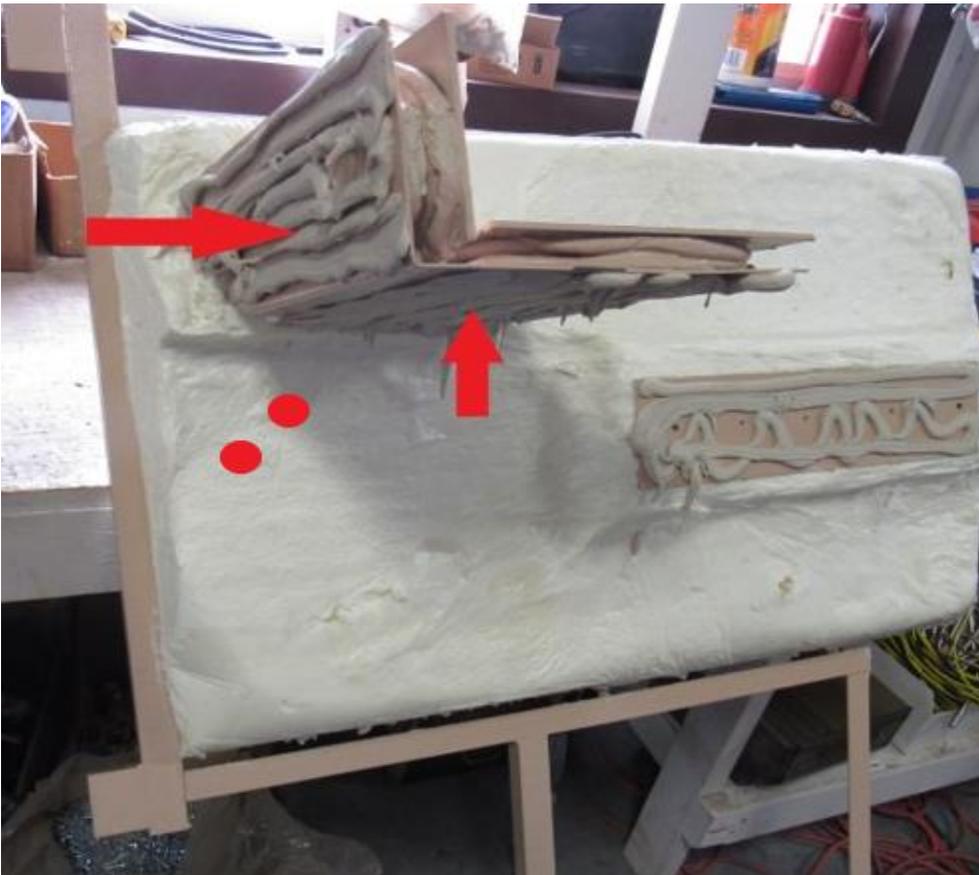
Controller wire should exit towards the lower right corner of the foam insert (RA)



Apply 310 thermal mastic to the fin and freezer bar sections as shown (RA).



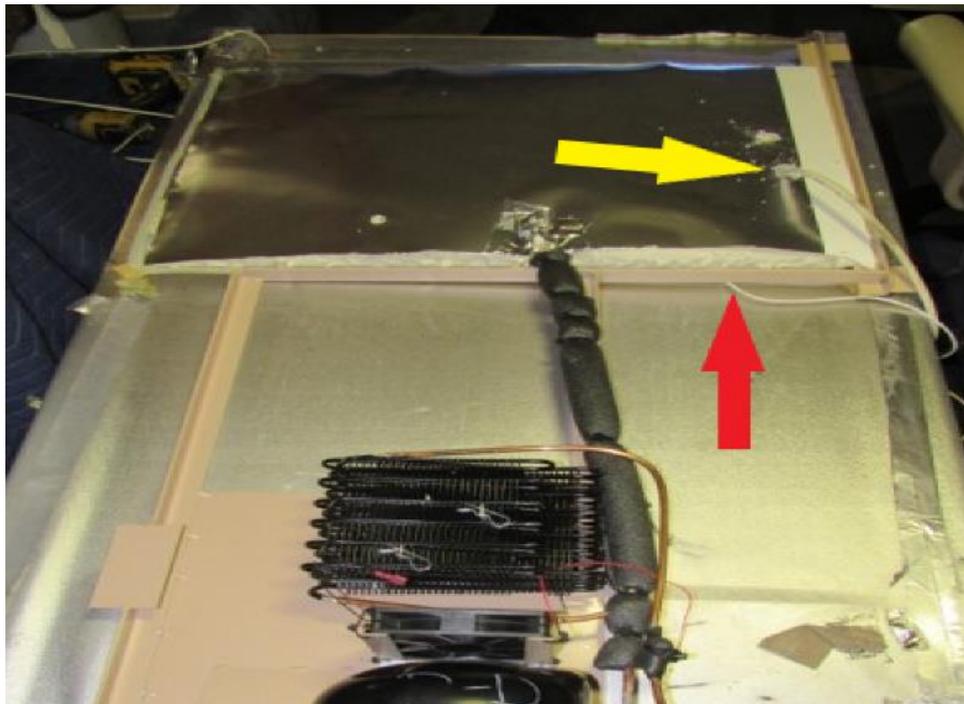
If ice maker is going back in you will want to measure the holes off the old unit, take a $\frac{3}{8}$ " hole saw or drill and make the holes in the same place old unit had them so they line up when new unit is installed (red dots)



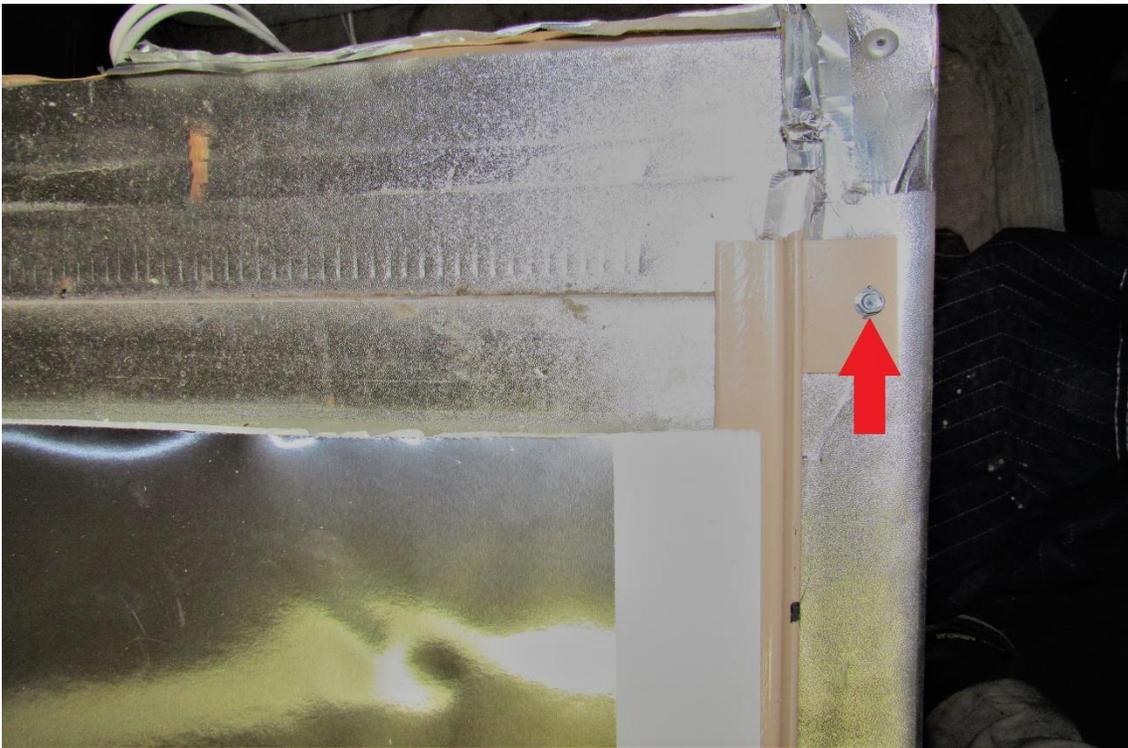
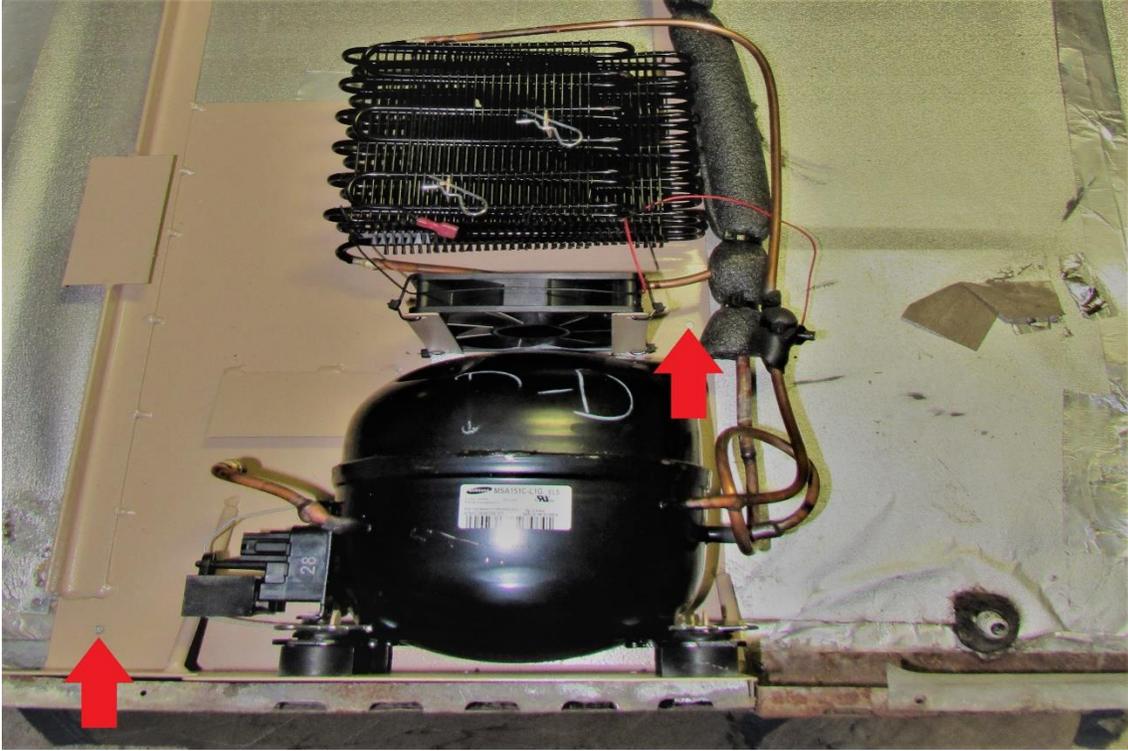
Now lay the unit down into the cavity of the fridge box being careful not to scrape off the thermal mastic on the freezer section. Feed your ice maker wires thru holes you made for these wires (if icemaker is being put back in)



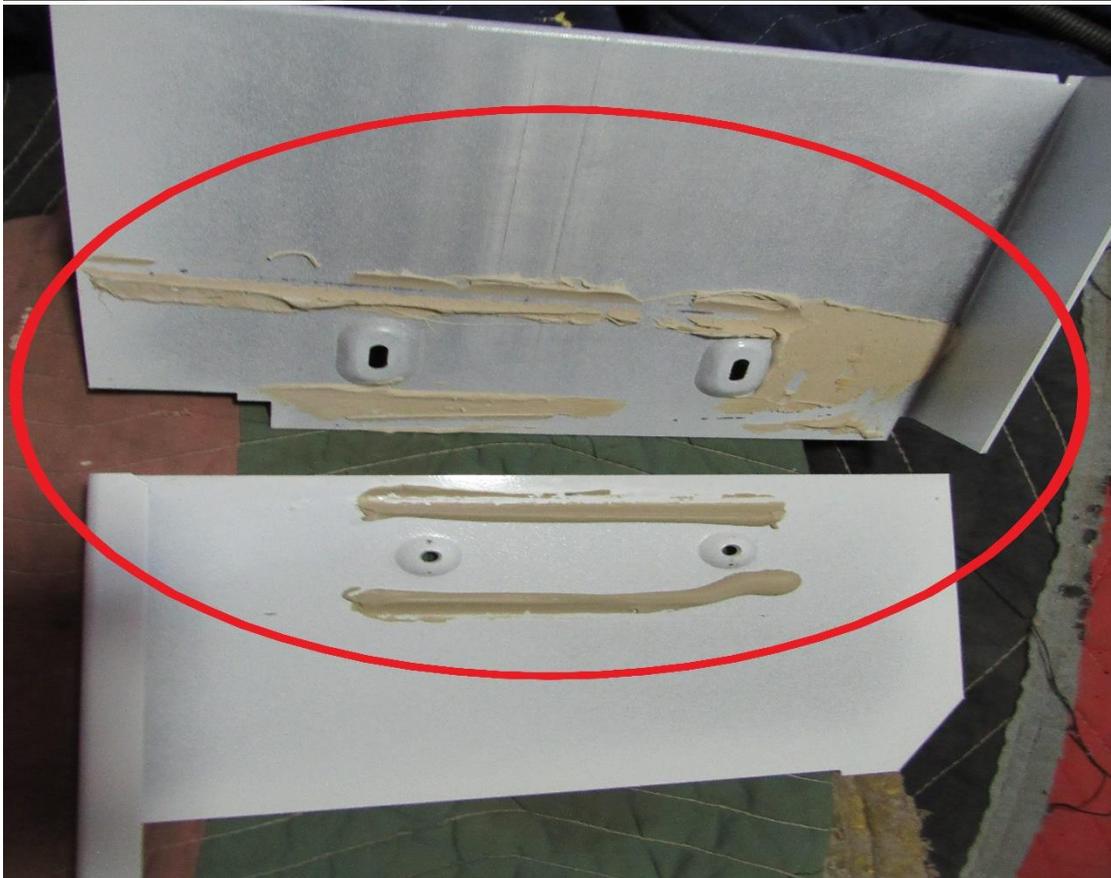
Ice maker power wire (YA) Controller wire (RA)



After unit is pushed all the way down, install two mounting screws on the bottom and one on top (RA) to hold the unit in place. Top mount hole is not predrilled so use the hex self-drilling screw (included).



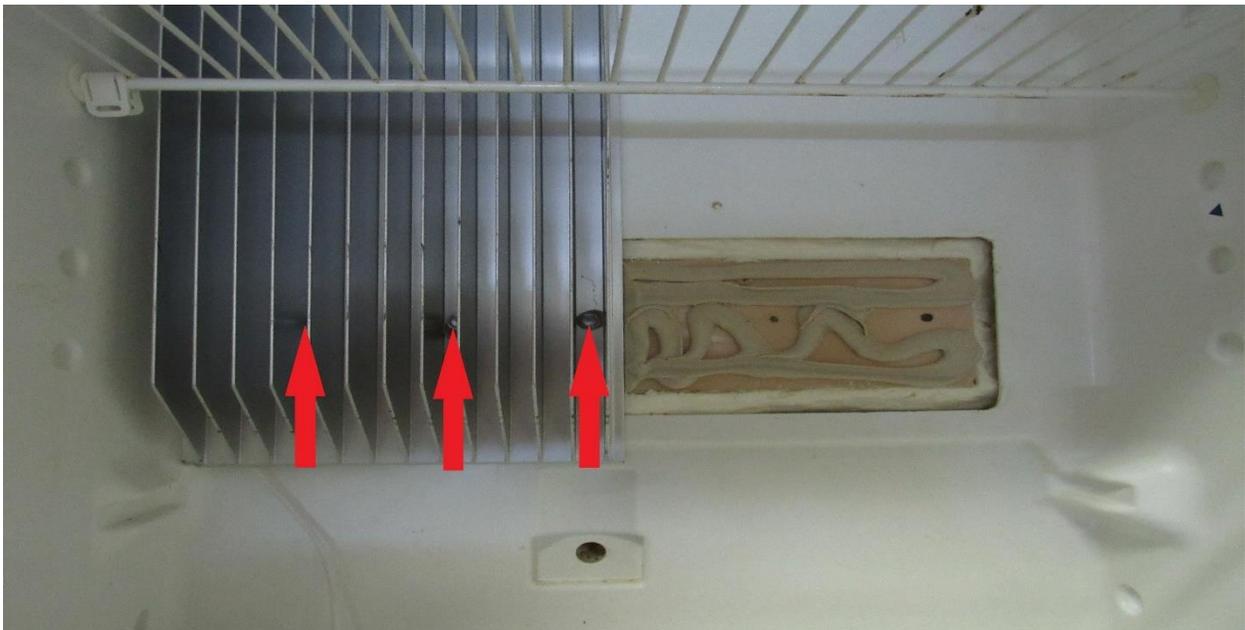
Clean old thermal mastic off of the refrigerator fins and freezer plates.



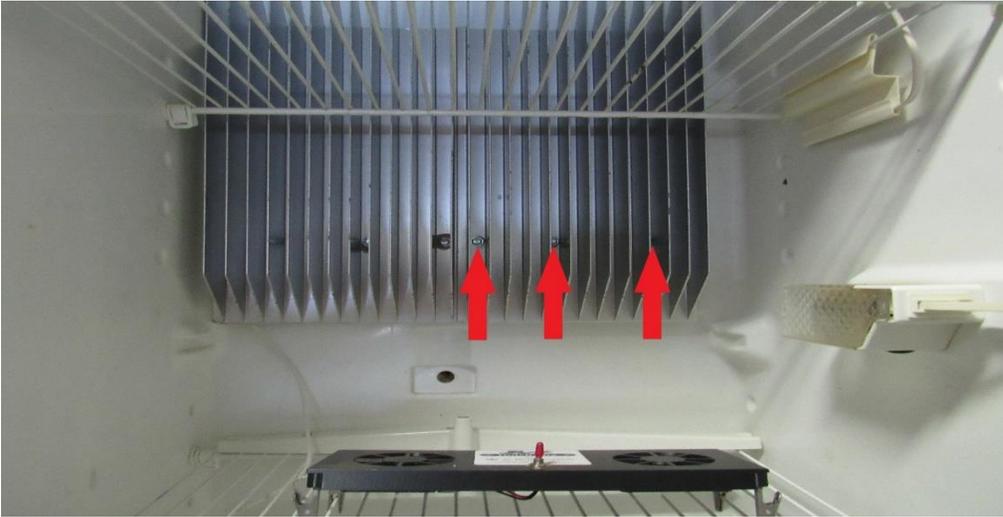
Set the refrigerator in the upright position. Notice: a gap between unit plate and plastic is normal, this will pull in tight as fin is installed. Cut a small notch in the plastic (**RA**) for the controller wire.



Using the hex head X 1" screws included, mount the left-hand side fin first (**RA**). Pull the screws in tight.



Do the same with the right side (RA).



Insert the defrost cup into the hole (RA)



Have someone connect the defrost hose on the outside. You might need to enlarge the hole in the foam a tad to let the hose slide in over the spigot



Make sure defrost hose is pushed tight into the cup spigot.



Push defrost tray back into place (RA).



Secure wire shelf into place (OA). Clip the controller as shown (RA). The thermistor on the right side of the fin (YA) will no longer be needed so you can leave it clipped to the fins or you can remove it. Fridge door can now be closed



Using the lasered holes on the new unit (RA), fasten the freezer plate onto the secondary system using the 1" hex screws supplied, pulling it in tight against each other.



This is how it should look after fastening both screws. If this freezer plate is tipped up or down, it can easily be pushed up or down by hand or using a pry bar. If its angled to the side this can be corrected once you screw the top aluminum piece into the box shown later



Cut the plastic trim piece on the red line and insert against the back of the freezer.



Apply a layer of thermal mastic to side of the freezer plate as shown.



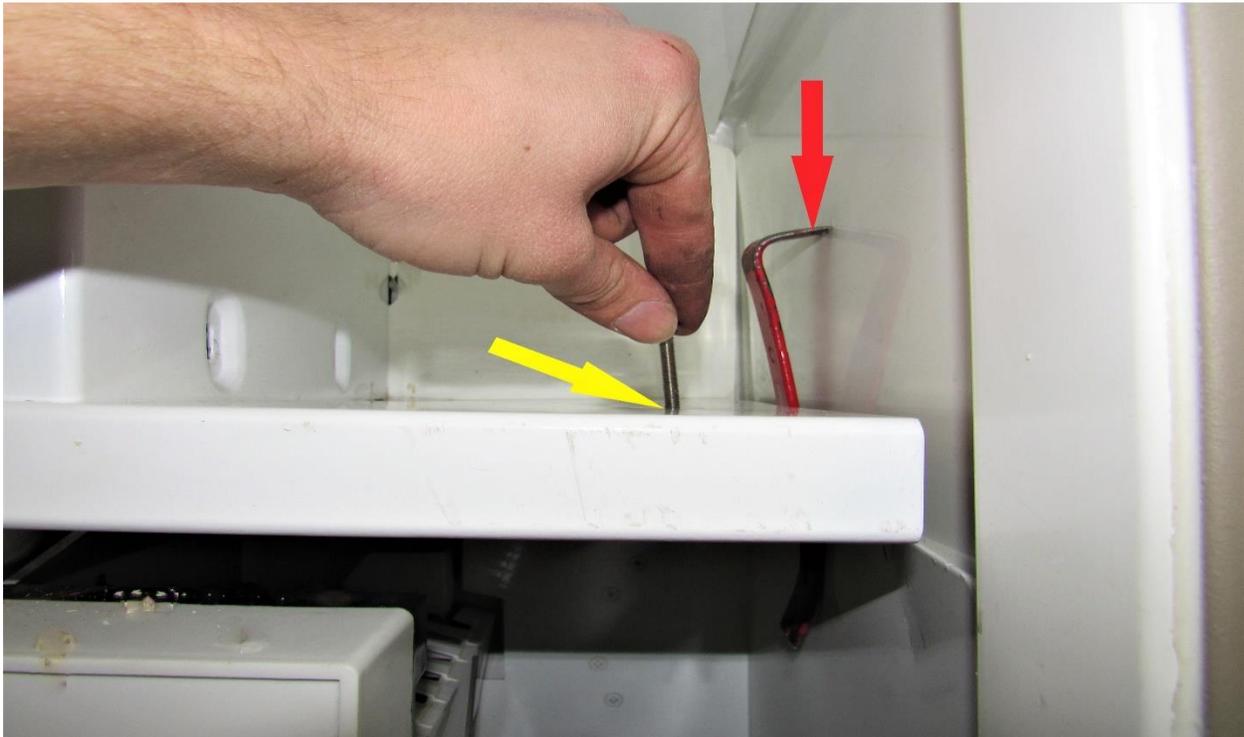
Fasten the screws into the top original mounting holes. (RA)



Apply a layer of thermal mastic to bottom of the freezer plate as shown.



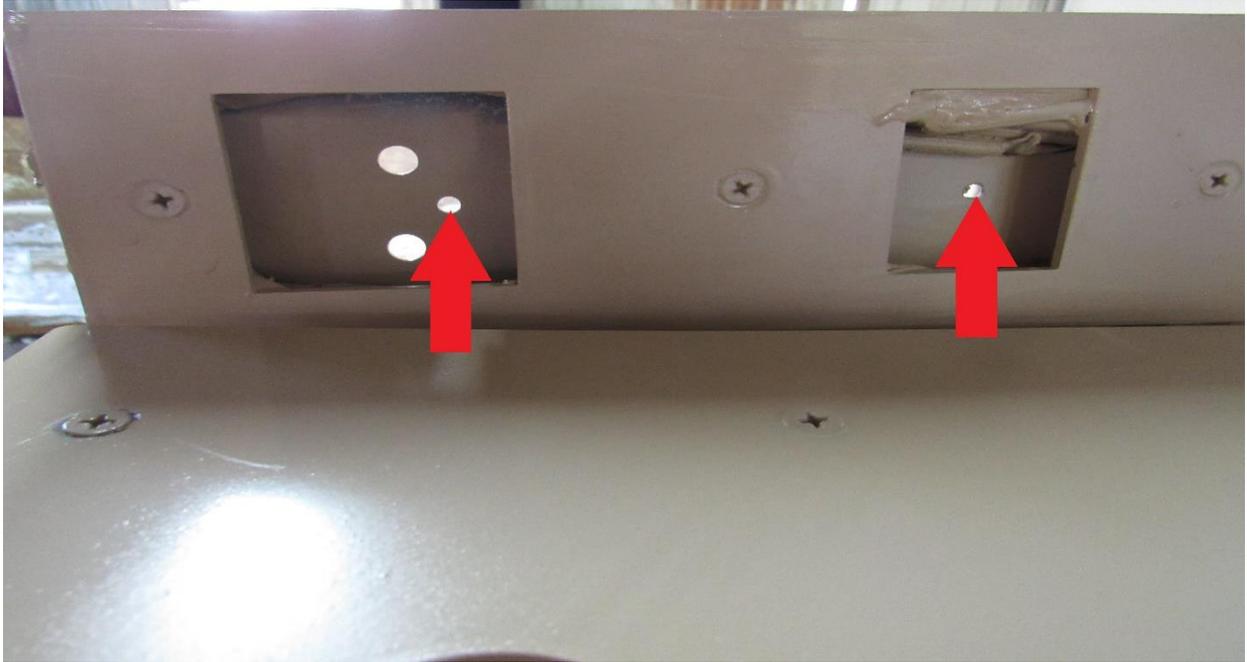
Insert the bolts into the bottom freezer plate (YA). Using a small pry bar works very well by inserting it between the freezer sidewall and plate as shown providing pressure against side plate to eliminate gaps (RA).



Thread the nuts onto the bolts (YA). Make sure to apply enough pressure to shift the plates left using the pry bar (RA).



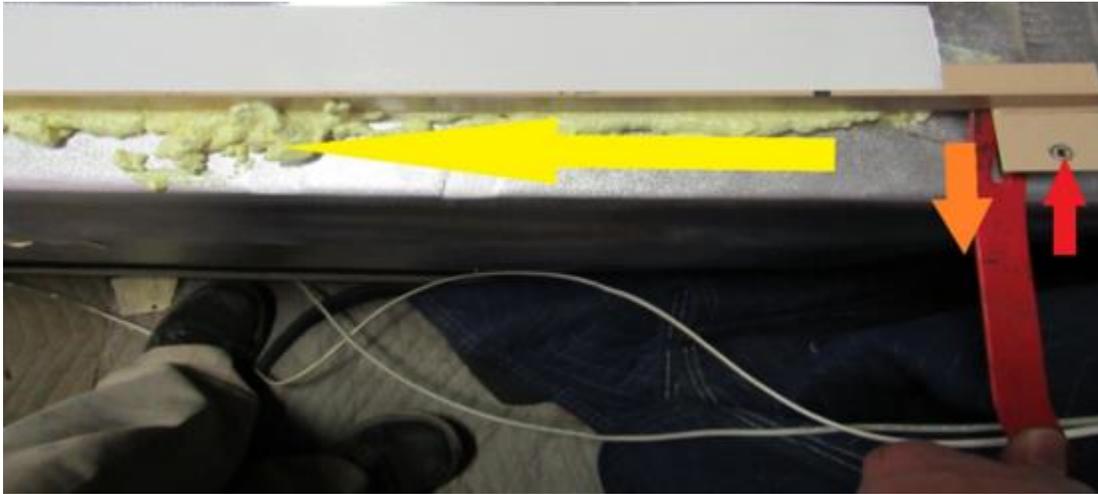
Fasten the side plate to the freezer bar using the 2 supplied 1 ¼" screws into the holes (RA).





Warning: Make sure this step gets followed precisely, otherwise your fridge is unable to cool properly.

Set the unit back down on its face. Take the can of great stuff foam and shake for a minute, then proceed to fill the gap around all four edges. Remove mounting screw (**RA**), pry the brace away from the box (**OA**), and fill in the gap (**YA**) with foam.

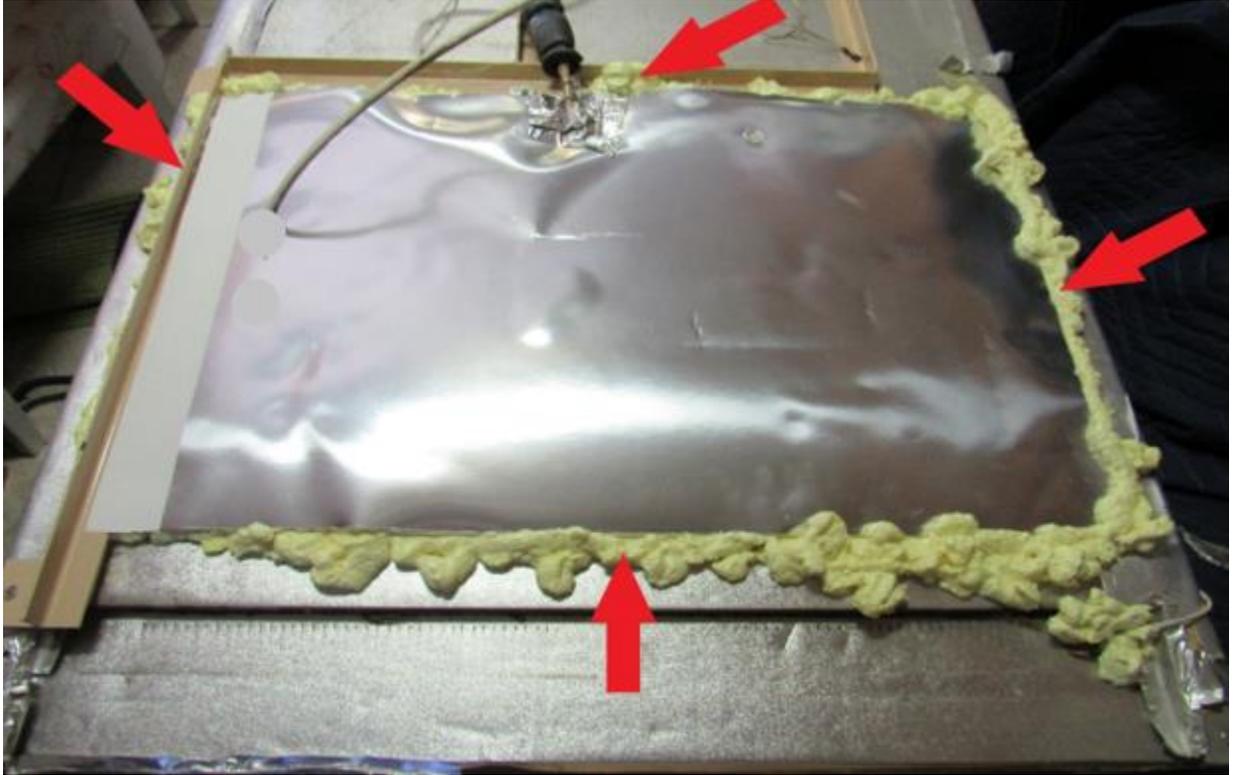


Repeat on left side. Pry away the brace and fill in all gaps with foam (**RA**).

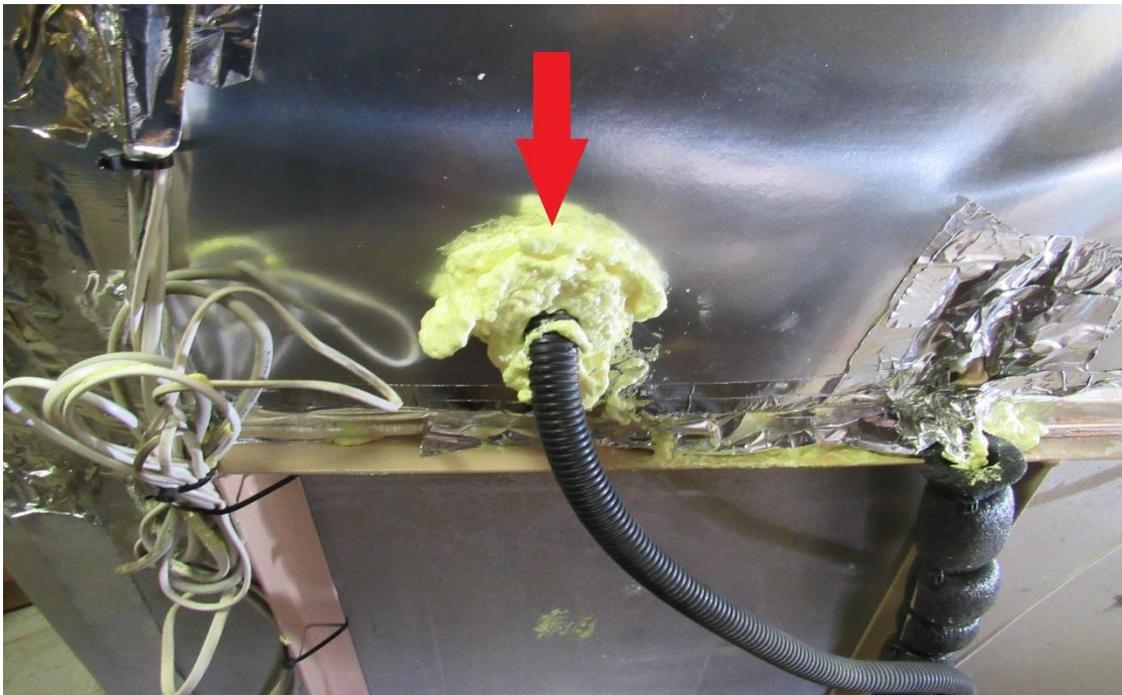


Fill all gaps around all four corners with foam (**RA**).

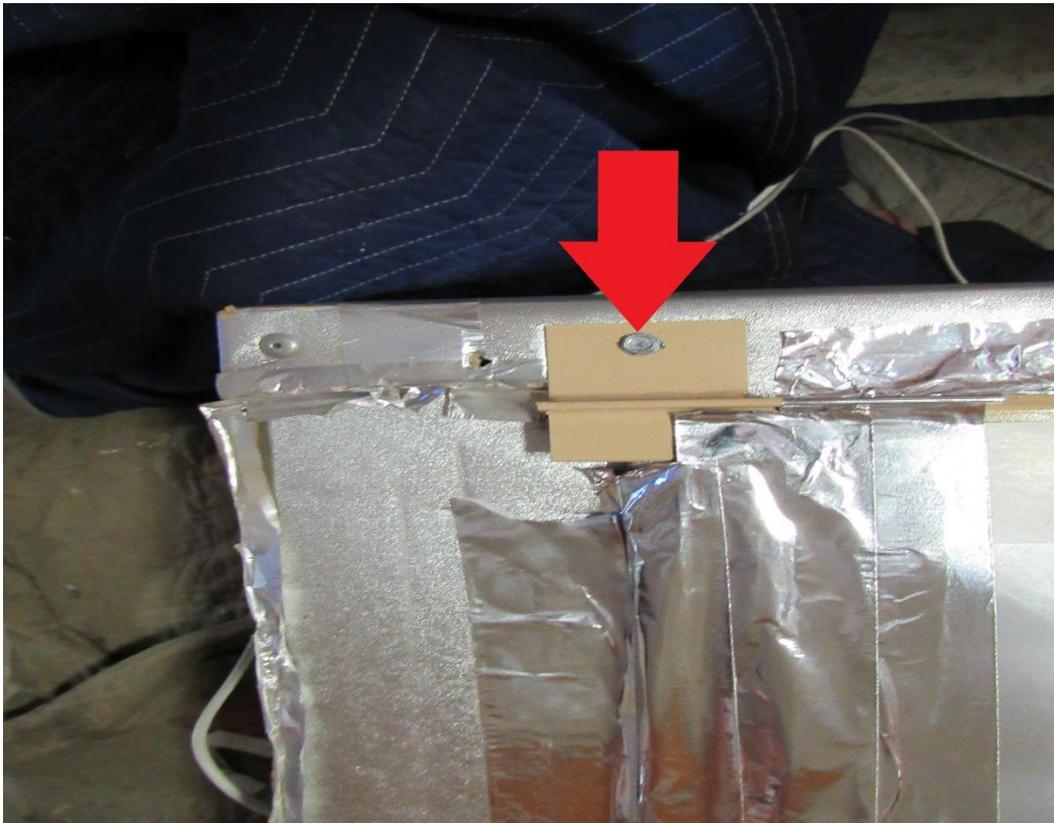
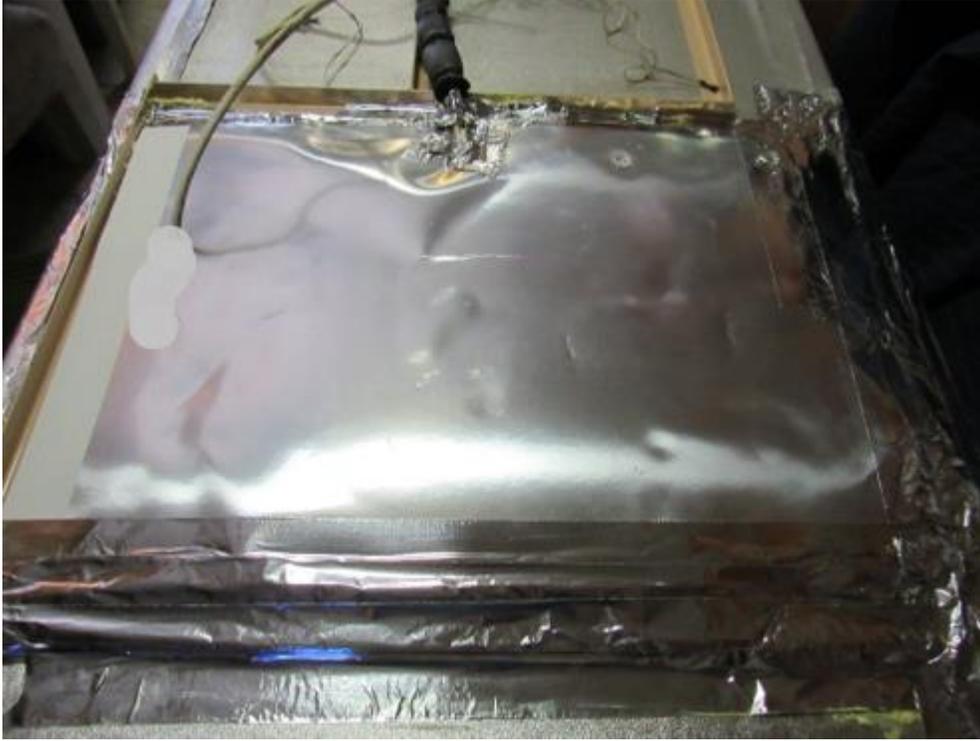
Make sure all gaps are filled!! If unit foam is not down even flush with box this is not a problem as long as its sealed. Leaving even a small gap will result in your fridge not getting cold enough



Fill all gaps with foam (RA).



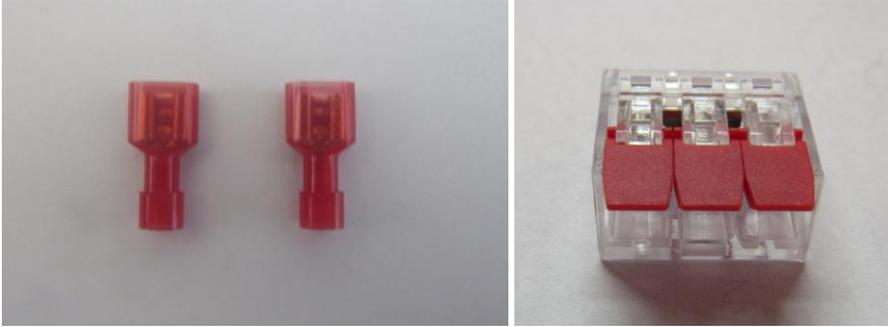
Tape all four corners with the supplied tape and re-install mounting screws (RA).



Controller wiring

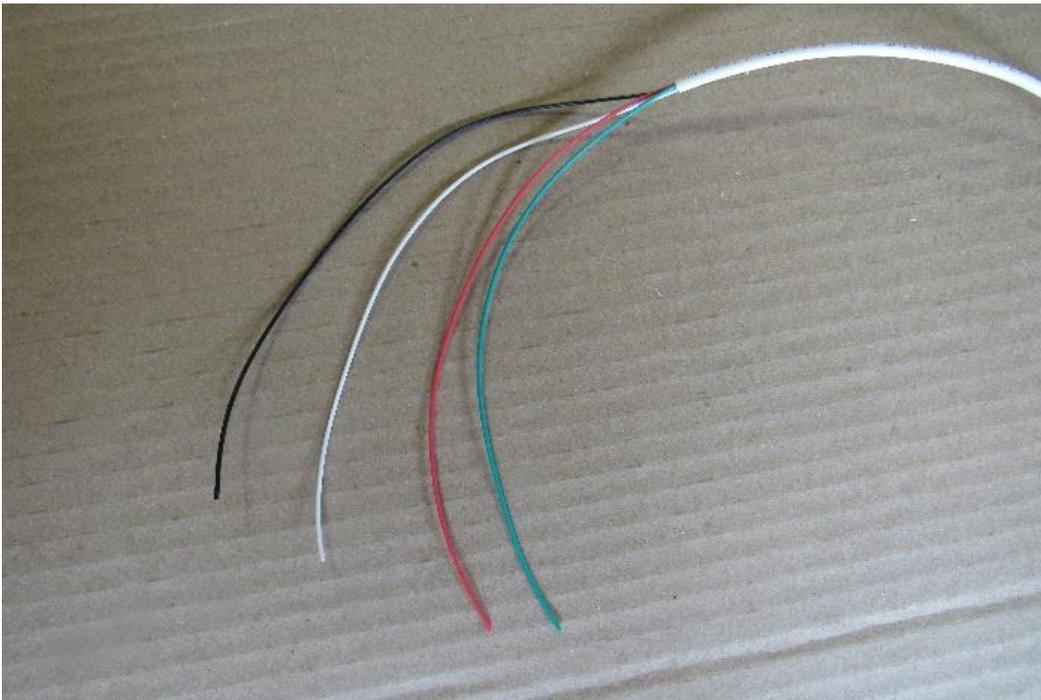
Included in Package:

1- Control Assembly 2 – red female wire connectors 2 – wago connector



If this wago is something new to you, all you do is lift the flap and push a stripped wire inside and snap the flap back down and it will be secured.

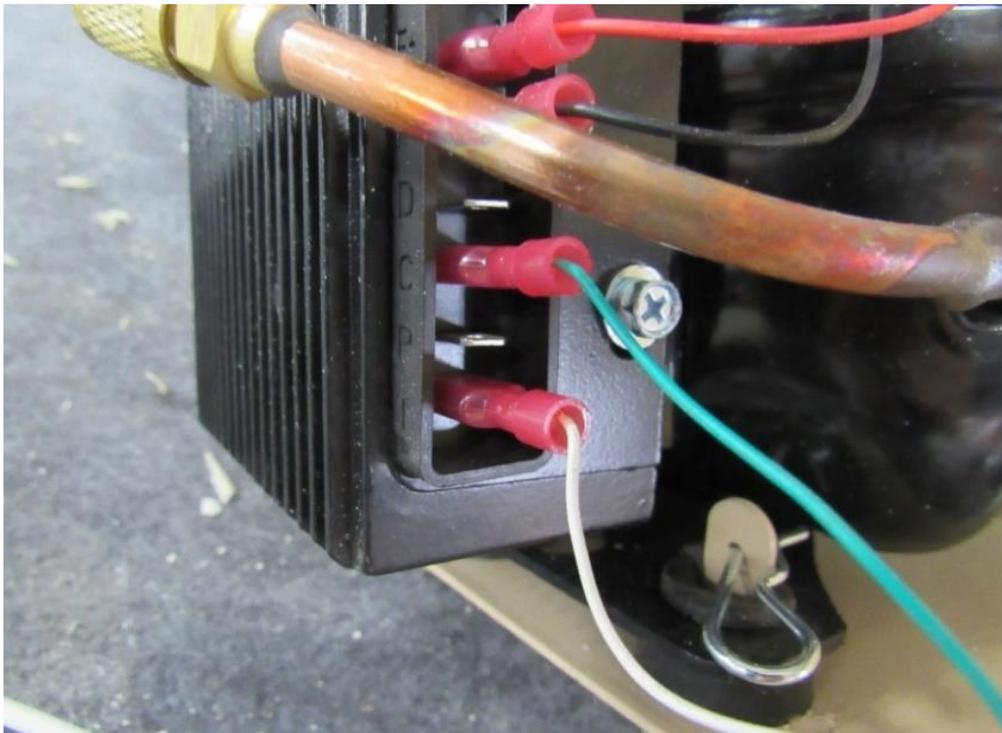
Strip about 6 inches of the white coating off of the end of the wire. Inside there will be 4 smaller wires, red, black, green and white.



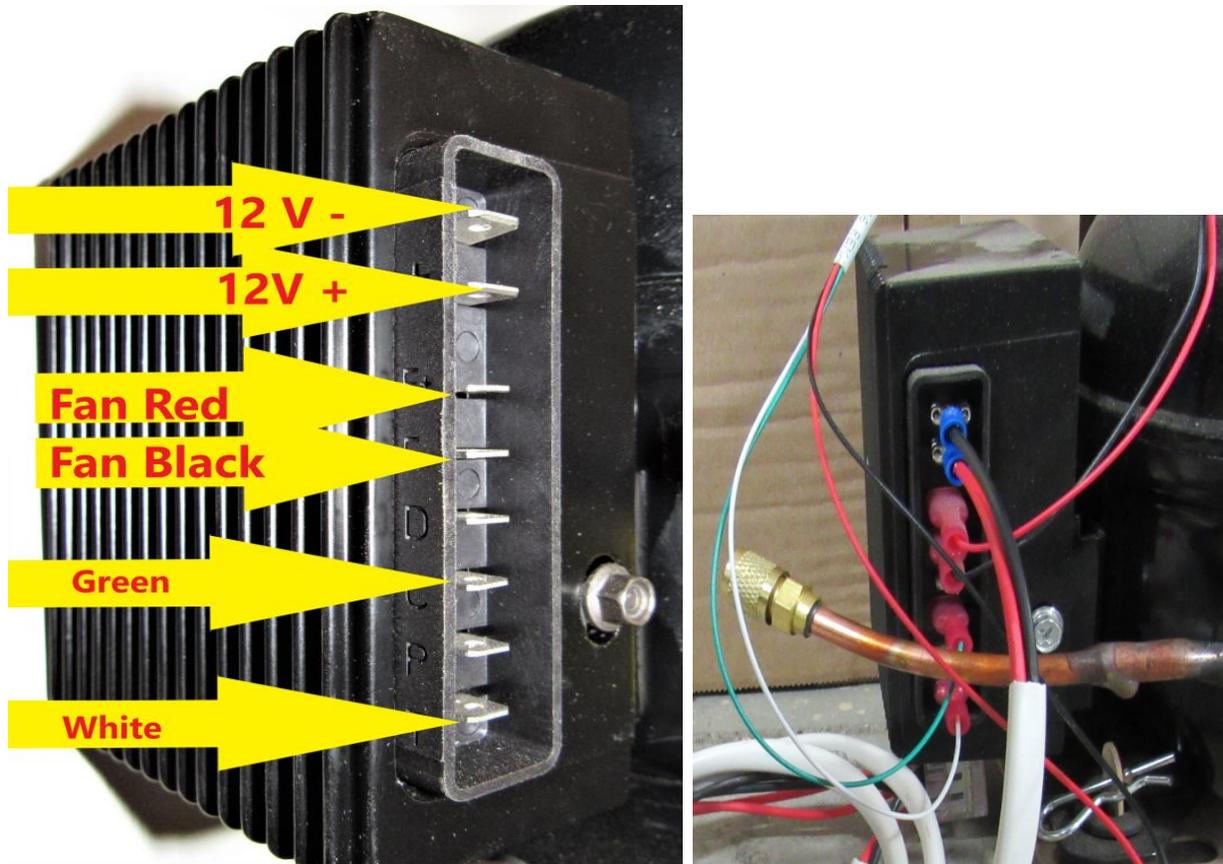
Take the green and white wire and strip about $\frac{1}{4}$ inch off the end of the wire. Then take the red female wire connectors and crimp it onto the end of the green and white wire.



Take the white wire and plug it into the bottom spade on the side of the control box of the compressor. Take the green wire and plug it into the third spade from the bottom up on the control box on the side of the compressor.



Here is how the compressor should be wired when all done: The red/black wires coming from your controller will be hooked up using the 3 slot wago included later

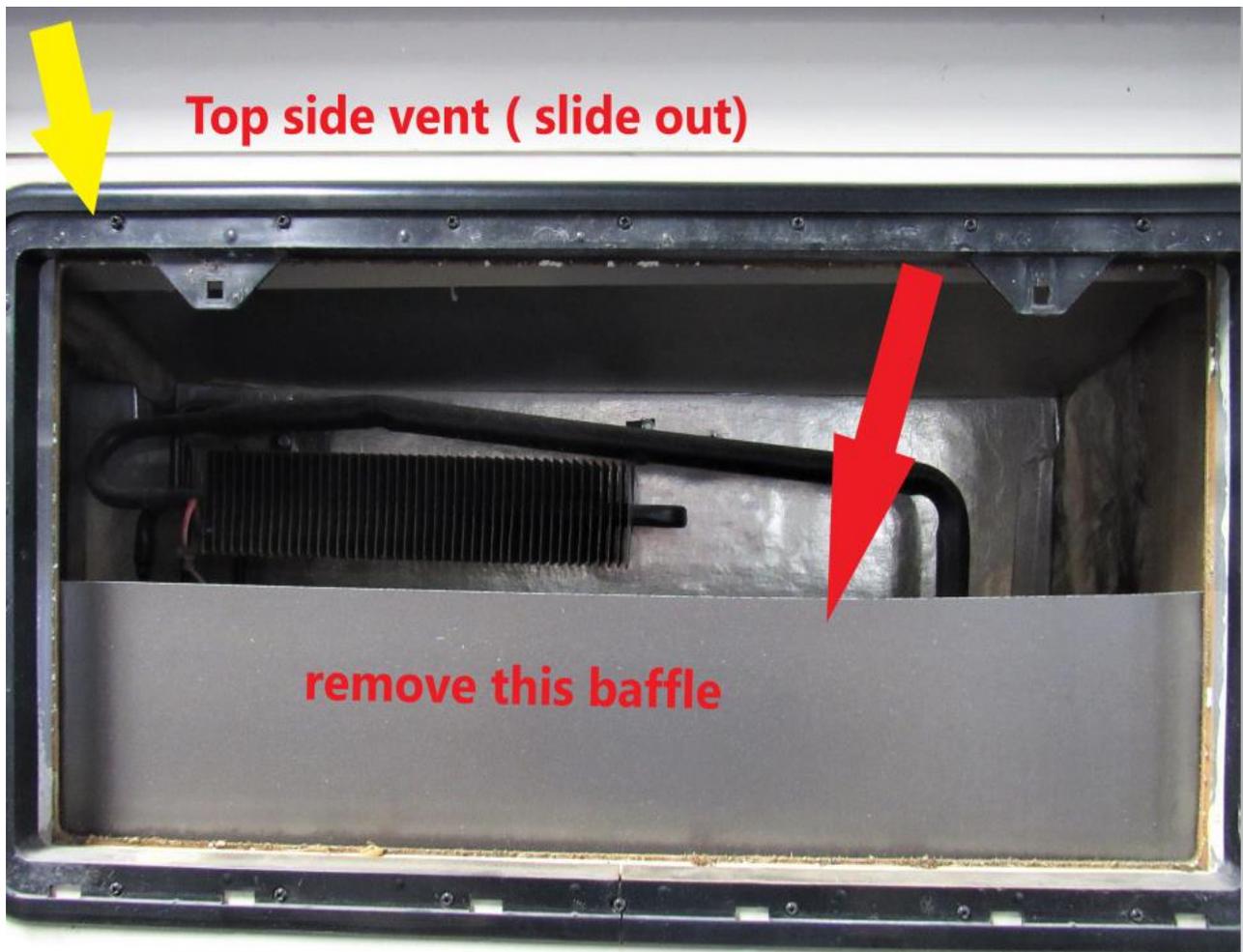


Now is a good time to zip tie all loose wiring and defrost hose into place, also a good time to inspect the fridge cavity to make sure its clean. Fridge can now be stood up to get ready to insert into the cavity. Here is a good time to run the new 10ga wire to the battery if you know its needed. We do not show this as the floor lay out the procedure needed will vary a lot from coach to coach. But the ending result should be a new 10ga wire from your coach battery to the fridge with a 30A breaker/fuse located at the battery to protect the wire.



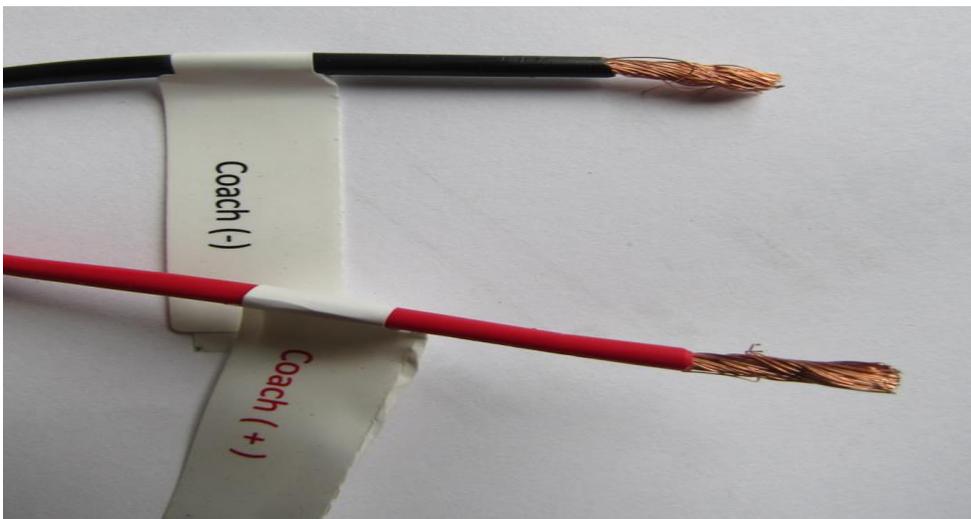
Warning: Please make sure and follow thru this step, otherwise the unit could over heat causing damage to the unit.

Before installing the fridge back into the cavity, check to make sure wall insulation is secured and this is a good time to sweep or vacuum any loose debris. If this fridge is installed into a slide out then make sure and remove the top side vent (YA) baffling (RA), as you will no longer need this and all it will do is slow air flow. If It's installed into a roof vent style then nothing has to be changed, but make sure and leave both vents open, as this unit will still have to breathe.



Now you're ready to slide the refrigerator back into the cavity. Once it's started it helps to have someone outside to watch as you slowly push the fridge back into place, making sure the gas line is out of the way. Do not attach the mounting screws to the cabinet yet, we want to test first in case the fridge has to be slid forward a tad to run a new wire.

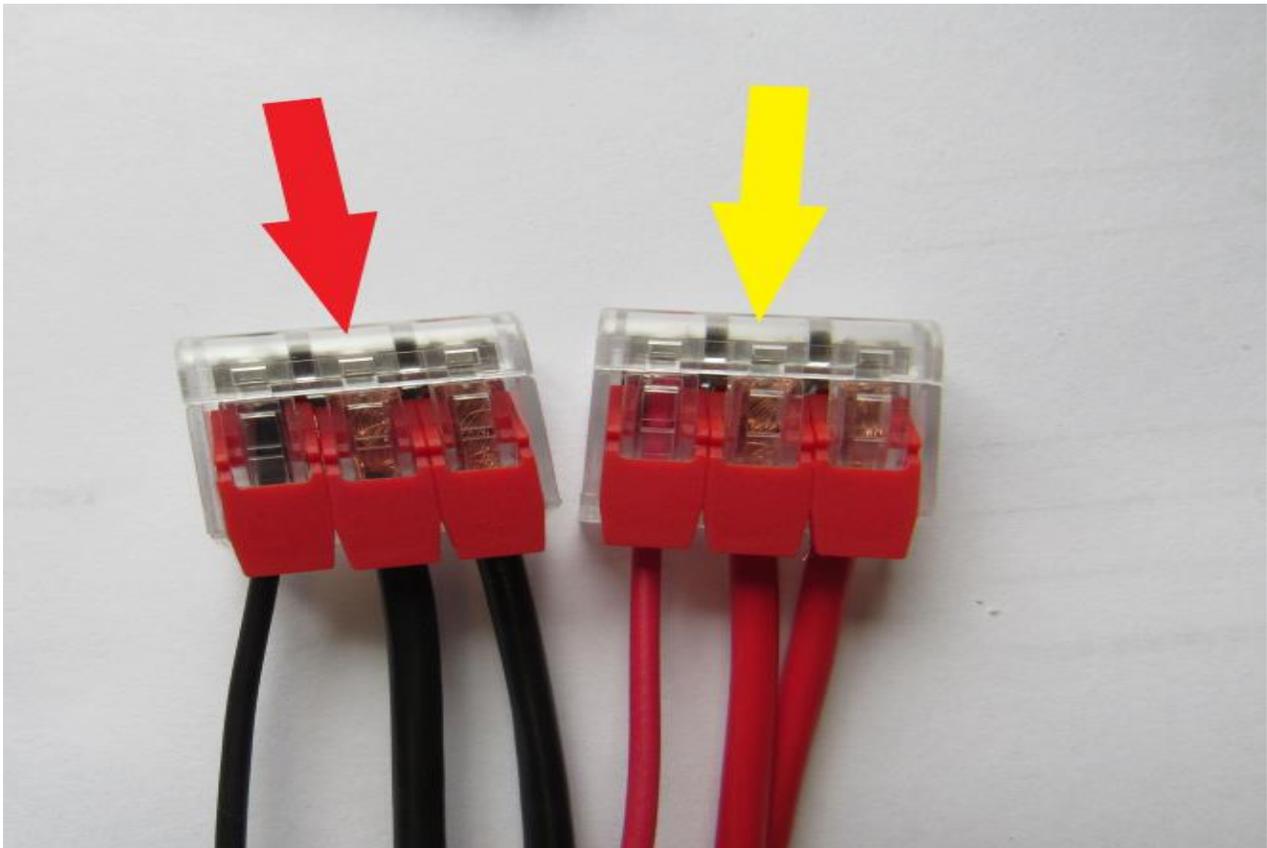
The wires labeled Coach coming from your compressor will be plugged into your 12V wires coming from the coach batteries using the 3 slot wago. Your red/black from the controller will then be snapped into the empty slot of this wago



(RA) Negative coach wire, black controller wire, Top Black compressor wire
(marked coach-)

(YA) Positive coach wire, red controller wire, 2nd top down red compressor wire
(marked **coach +**)

Please note in this pic your coach ground is black and your coach positive is red,
this is only a guideline, your coach wire color will vary from coach to coach
dependant on the manufacture



Refasten the door handles.



Operating the Controller:



Mount your controller central onto your fins. The switch on the front is to turn your fridge on or off. When lifting the switch to the on position the temp controller will light up, the fans will turn on and the light will turn on as the motion sensor will detect your movement. (After 30 seconds of no movement, the motion sensor will shut the light off.) The blue number (bottom) on the temp controller is your set point and the red number (top) is the actual temp inside the fridge. The temp is preset to 34F, to adjust temp up or down use the diagnostic sheet for instructions. If you are using another temp sensor, just be aware the controller temp and your other source of temp reading might not always be the same, and this is ok, just rely on the temp sensor read out you are used to, but make sure yours is either digital wired or wireless. After compressor has turned on you can now put your screws into the cabinet. If it does not turn on and just cycles you will have to run a new 10ga wire to your battery with a 30A breaker at the battery to protect your wire.

Remove the top control panel and fasten the top mounting screws back into place (RA).



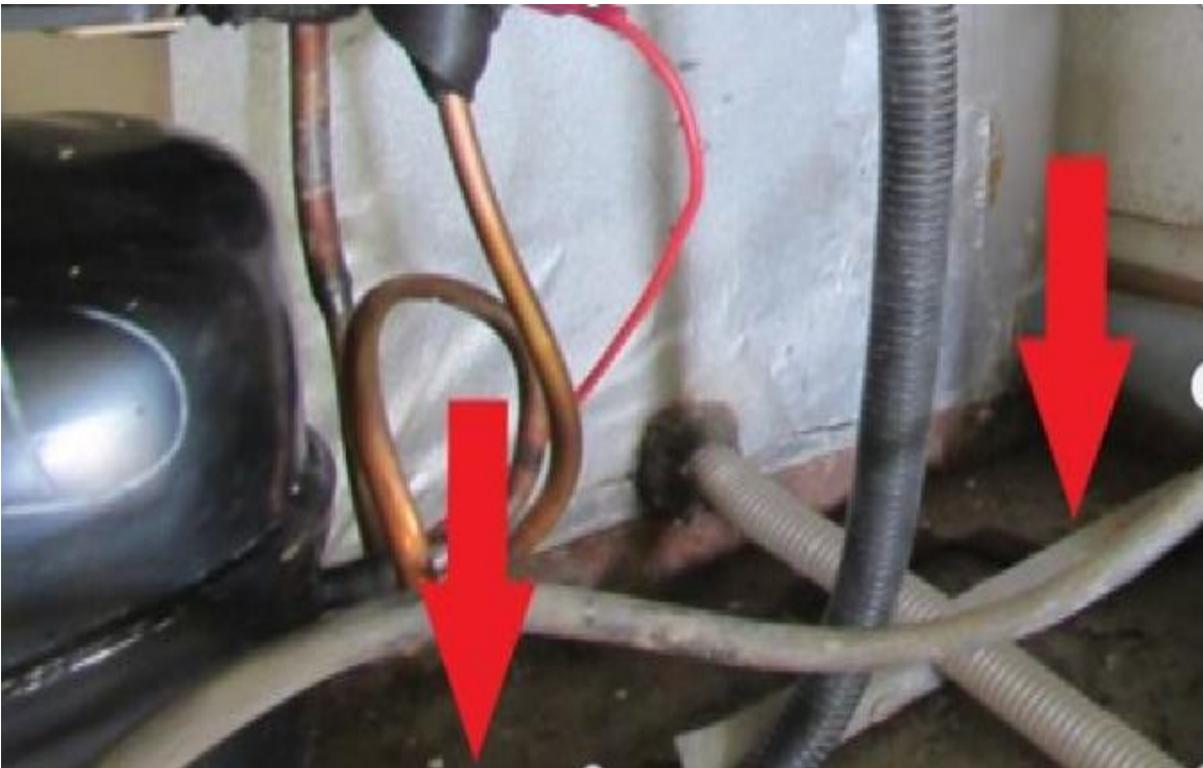
Fasten the screws that hold the top control panel into place (RA).



Fasten the bottom mounting screws (RA).



Re-install the rear mounting screws (RA). Refasten your defrost hose how it was prior



Hvac Universal Controller Introduction

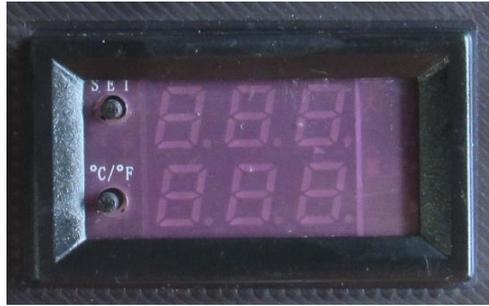
This controller eliminates all of your existing Dometic controls. So that means that your front display panel, your interior light, and your rear control board will no longer work and can be taken out if need be. This new controller has its own on/off switch, temp control thermostat, as well as a light bulb that is motion activated. Long Life roller bearing fans to give you frost free satisfaction for years to come



Low Ambient Heat Lamp:

On the back side of the control assembly there is a little switch. By flipping this switch to the up position, it bypasses the motion sensor and keeps the light bulb turned on constantly. If you are using your fridge in cold weather (Usually 40F or lower), your compressor doesn't have to run very long in order to cool the fridge box, and this will cause the freezer to only stay around 25-30 degrees. Turning this switch to on will make so the compressor runs just a tad more thus dropping your freezer down to where it needs to be. Once the weather warms up or you move to a warmer climate, flip this switch back to the down position so that the light bulb is motion activated again. If this switch is in the up position while you are in warm/hot weather, you will cause the compressor to run longer and work harder than it needs to. Make sure this is in off position (down) unless needed.





Set Temp

Press “SET” (top button) briefly, bottom blue number starts flashing. While it is flashing you can adjust temp up using top (SET) button or down using bottom (*C/*F) button.

Enter Diagnostic and Mode settings: **We highly recommend not changing any codes unless it’s absolutely required, as this can change other things as well.** Press and hold top (SET) button for approx. 4 seconds. P0 will flash first. You can then scroll through code settings using (SET) button to the setting needed. Once the desired code is reached, press both (SET)(*C/*F) buttons in at the same time, then the bottom blue letter or number will start to flash. Then use top or bottom button to adjust up or down in order to achieve desired setting. Once reaching desired setting, press both the (SET) button and the (*C/*F) button at the same time and the setting will be saved.

Code meaning:

P0 = Lets you switch between heating (H) or cooling (C). You want to make sure it is set to cooling (C)

P1 = This setting determines how far above the set temp the actual temp in the fridge can rise to before the compressor turns on, preset for 2.5

P2= Not needed or used

P3 = Not needed or used

P4 = If actual temp inside the fridge box does not match the top number on the thermostat, this setting can be used to calibrate up or down to make the thermostat temp match your actual box temp. This setting rarely needs adjusting. (Note: One number adjusts the actual calibration by 2 degrees. So if you set it to 1, the actual temp will be calibrated 2 degrees warmer.)

P5 = This setting can be used to set a delay for turning on the compressor. This setting should not need to be adjusted.

P6 = This setting can be used to set a high temp alarm.

P7 = This setting is used to switch between Celsius (CH) or Fahrenheit (FH). It is preset to Fahrenheit.

P8 = This setting can be used to reset the controller to factory settings. Not recommended to use this setting.

We highly recommend using a digital wireless thermometer to monitor your inside fridge temps, many phone calls or temp misleading's can be avoided by making sure the thermometers you are using are accurate, you do not have to use our brand but we do recommend using something like this type.

<https://jc-refrigeration.com/product/refrigerator-freezer-digital-wireless-thermometer-free-shipping/>

Use digital wireless



DO NOT USE



Clip fridge sensor underneath second shelf down or first shelf beneath the fin, place it center front to back and center side to side (**RA**), if its clipped underneath it will be out of food containers way.



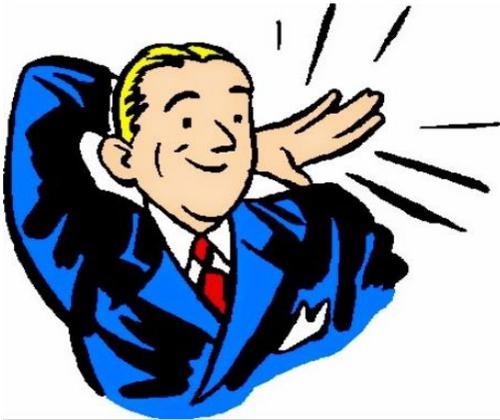
Same with freezer, clip underneath bottom shelves center side to side but have this one more towards the back of the freezer.



You are all done and ready to hit the road and do some serious camping 😊

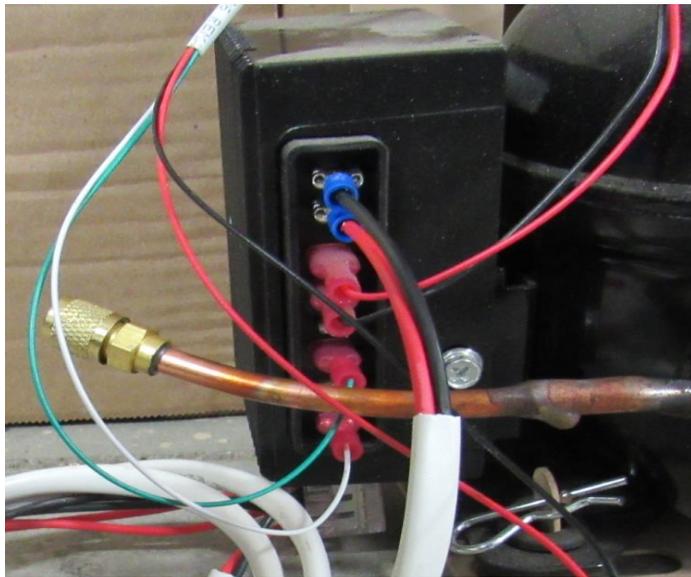
Let us know if you see any areas we missed or that should be made clearer, since we do installs practically every day, we get blind at times to things that should be mentioned or be made clear.

dahvac@outlook.com Thanks for hanging in there to the end, give yourself a fair pat on the back and enjoy your cold fridge for many years on your travels.



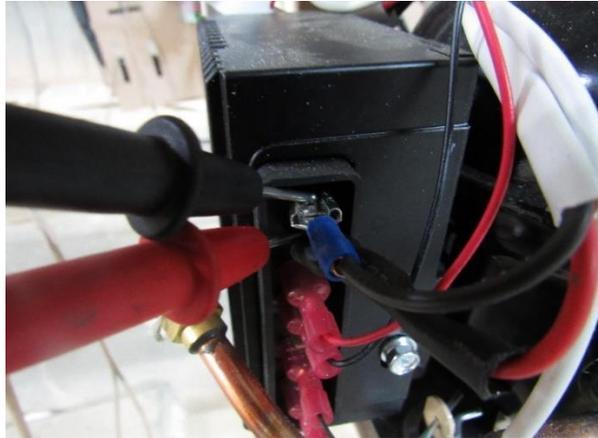
HVAC 12V Direct Wire:

If your compressor is not turning on for any reason and further testing is needed to see what needs to be done, here is a guideline to wire either compressor direct for the time being till the issue can be resolved. Pull off the thin gauge green and white wires that are on the bottom spade and the third spade from the bottom up. Then take a small piece of wire and crimp a female connector onto each end. Then plug one end into the bottom spade and the other into the third spade from the bottom up. This will now make the compressor run full time till your other issue can be resolved



Troubleshooting

#1 compressor starts but shuts back down after 5-15 seconds or less: check your voltage at the compressor at the time it tries to start. Compressor has a built-in low voltage shut off set at 10.4V. On startup is when the compressor draws the highest amperage, if voltage drops below 10.4V the compressor will shut down. The higher the voltage the lower the amperage, or vice versa, so in order to have compressor running at its most efficient, the voltage needs to stay above 12V while running.



FAQs

How much will the compressor actually run?

From our testing in 80 degrees, with the fridge and freezer empty, and the doors remaining closed for a 24-hour period, the 120V AC compressor will run approx. 56% of the time and the 12V DC compressor runs approx. 67% of the time. However, keep in mind that this can be very easily affected by a number of variables such as ambient temp, how often the doors are opened, and how much food is in the fridge/freezer.

What is covered under warranty?

Our warranty covers the cooling unit and any of our controls that came with the cooling unit. It does not cover any original Dometic parts such as the control board, the front display, thermistor, etc.

What if the cooling unit needs to be worked on and I'm not close to your location (Shipshewana, IN)?

Contact us first and we will try to help you get the issue resolved. Most problems can be fixed by us through email or phone but if more work, or hands on work is needed, we have a list of dealers/service centers in almost every state that have purchased cooling units from us before and could possibly help you out.

Is there any regular maintenance to perform on these cooling units?

The only thing that needs to be done on these cooling units is to take compressed air and blow any dust or debris out of the condenser fin. This can be done maybe once or twice per year.

