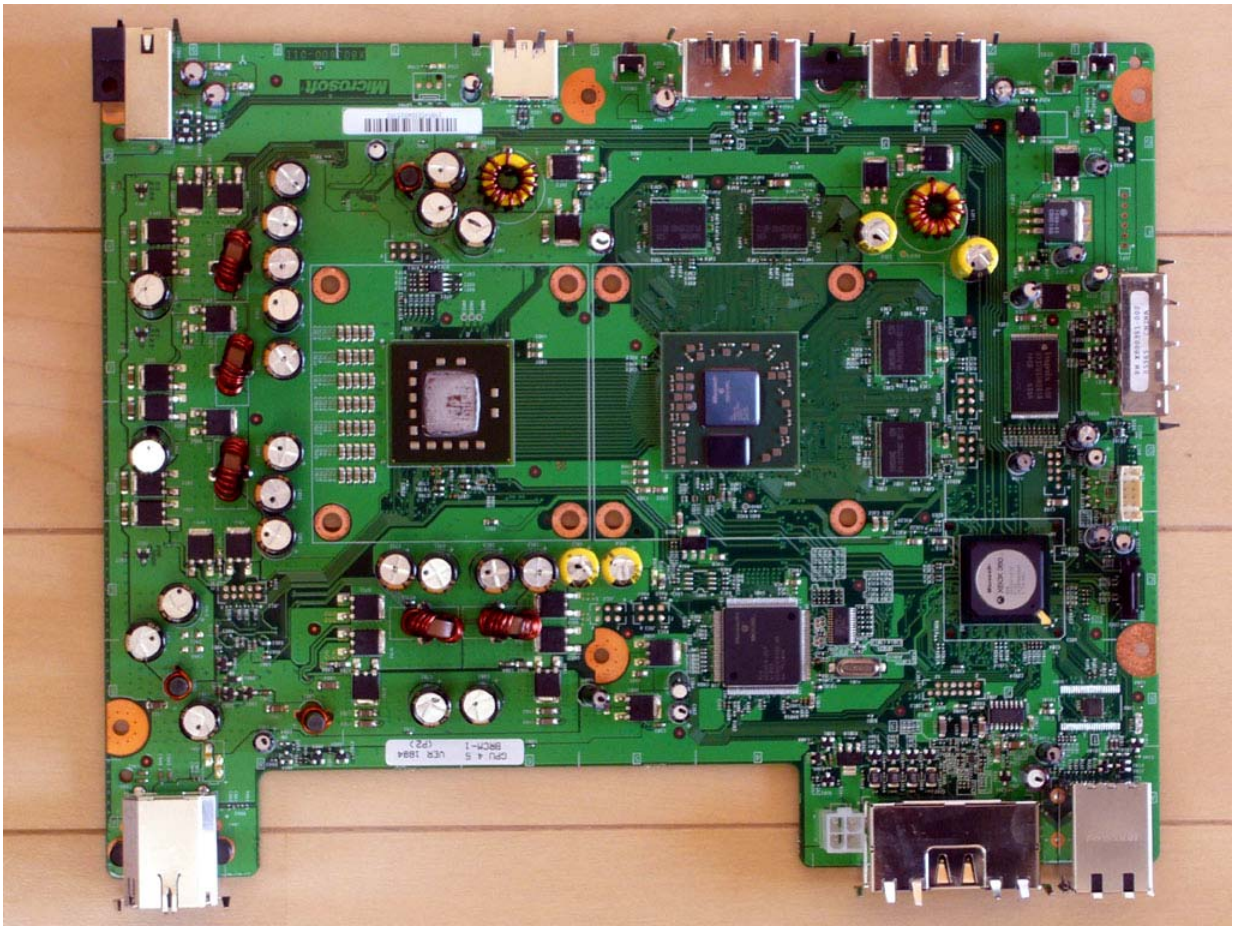
Repair Section

We need to remove both heat syncs from the motherboard. Heat syncs are shown in the picture below.

We will start by removing the X clamps from the bottom side of the board. X clamps are shown in the picture below.

Using a decent size flat head screwdriver, insert the blade into the slot at the end of one of the clamp legs where the clamp folds over. The flat part of the blade should be parallel to the board with the end of the blade touching the stud the clamp is holding onto. Now torque the screwdriver (Do not pry up) as if you were trying to loosen a screw. This should spread the fold in the clamp open and release it from the stud. It is very important not to pry as you could slip and gouge the board. Repeat the process on two more of the legs on the same X clamp. When three of the legs are free, the clamp should just come loose. Set the clamp off to the side. The heat sync is now free and can be pulled straight up and free from the top side of the board. Remember the orientation of the heat sync to the board. Set it off to the side.

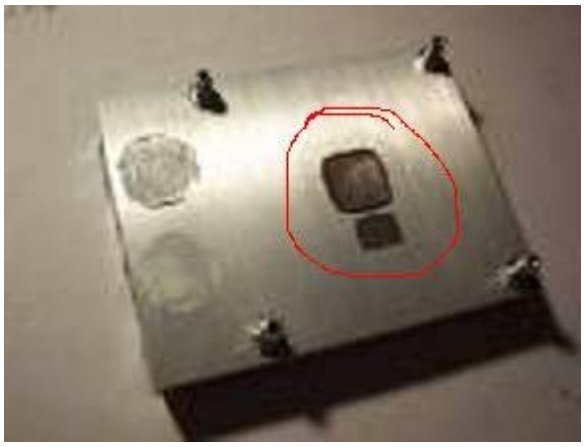
Repeat the procedure above on the second X clamp and heat sync so the board looks like the picture below.



Special note: Before moving into this section, we would like to add a few points about the thermal paste that comes with our kits (if you opted for a kit with paste). Outside of the premium Arctic Silver products that we offer in some kits, the standard paste we use is manufactured by Stars, Inc. It's a much better quality paste than originally used by Microsoft. The standard Stars paste is sent to us in several different color packages but it's all the same paste. So please don't be surprised to see your listing with a red, blue or orange package and we sent a blue, orange, red, etc. If you opted for a kit with the Stars paste, your blister pack will look similar to one of the following below.

I would like to address the amount of paste to use. A common misconception with thermal paste is that more is better. Each blister pack will fix at least two units. It's very important not to use too much paste. A little dab about the size of a small apple seed/grain of rice will do it. To illustrate, we emptied a blister pack into four small little piles as such:

We now need to remove the old thermal compound from both the GPU and the CPU, and both heat syncs. You can clean this off with a q-tip lightly soaked with rubbing alcohol or if you purchased a kit with our cleaner/purifier/q-tips please use that. With our cleaner/purifier, first use a q-tip lightly soaked with the cleaner to remove the old paste. Then follow up with an application using a q-tip lightly soaked in the purifier. Be careful not to use too much alcohol or cleaner/purifier, this can leave a film on the item you are cleaning. After you get it clean of all remaining compound, use a clean dry cloth to gently polish the GPU and CPU to a shine. The picture below shows you the leftover thermal compound on one of the heat syncs. Now we need to remove all 8 studs from both heat syncs. The studs are just threaded in and are the same size and thread type of the screws provided in your kit. Remember to turn right to tighten, turn left to loosen. Once all studs are removed from both heat syncs you are ready to begin reassembly.



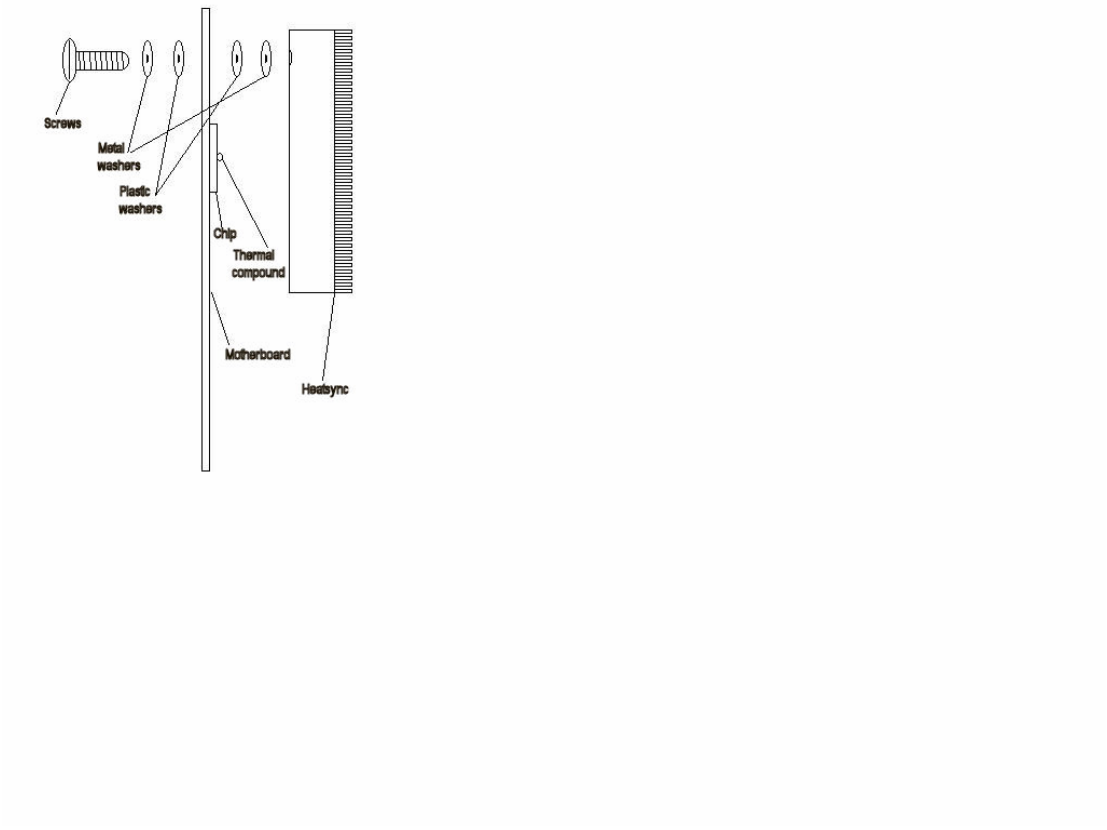
Before you start putting things back together you need to apply the thermal compound supplied with your repair kit (if you purchased a kit with paste) to both the CPU and GPU on the board. Please see our special note above about the amount of paste to use and packaging, etc. Apply a very conservative amount of compound to one of the chips (about the size of a small seed/grain of rice). Now spread the compound around the face of the chip with a credit card. Do not over do it. Too much compound is as bad as not enough. You basically want to end up with a smooth, even flat coat of compound on the chip. It can seem like there is not enough compound, but please try very hard and be patient to spread what you have on it before resorting to adding more. Repeat this process on the other chip.

We will now begin to re-secure the heat syncs. Below is an illustration of the order of the screws and washers for you to reference. Take all eight screws provided with your kit and place one steel flat washer (also provided) on each screw. Now put one plastic washer (again provided) on each screw on top of the steel washer. Set the screws (head down) so the washers will not fall off, in a location easy to access while working one handed. Stand the board on one end, take one screw and put it in a hole of the heat sync you want to start with, so the head of the screw is at the bottom of the board and the threads are sticking out of the top. Slide one plastic washer onto the threaded side of the screw you just

put thru the board. Now slide one metal washer onto the threaded side of the screw. Repeat this procedure to the three remaining screws for the heat sync you are starting with.

With all four screws and washers in place, put the heatsync into position on the board and start each screw in the correct hole. Keeping in mind the orientation the heatsync came off from. With all four screws started, gently snug them all the way down, but do not torque them all the way down yet.

Repeat the above procedure for the second heat sync. Below is an illustration of the order of the screws and washers for you to reference.



This next step is critical that you follow these steps to a tee. * Read ahead to the exclamation points so you know exactly what is coming before you do this step*

Place the board back into the case bottom but do not screw it down yet. Leave the fans unplugged, hook the DVDrom up (both power and Sata cables) and set it off to the side a bit. Plug the RF board with the power button back in but do not screw it back in yet. Plug in your AV cable (it is not necessary to hook to a television), and power supply to the Xbox and wall outlet.

Turn on your Xbox360. You may or may not get the three flashing red lights at this point. Either way, let the Xbox360 run until the ring of lights turns to two red lights. It will be the two left lights. At this point let the Xbox360 run for exactly two minutes then power off!!!

Let your console cool down a bit so you don't get burned on hot parts but do not let it cool all the way down. With the console still a bit warm, remove the RF board, DVD rom, AV cable, and power supply.

Take the board back out of the bottom case section and do a final torque to the heatsync screws. Do not over tighten, but tighten securely. Be very careful not to allow the screwdriver to slip and gouge the board. Allow the board to cool completely.

At this point, it's a good idea to go ahead and hook everything back up and test for green lights. Do not completely re-assemble the case at this point though. Fire the system back up and if you have green lights you are good to go! Pat yourself on the back and give a quick "woohoo" if you like. If you do not have green lights at this point (which will happen 5-10% of the time), please see below for further instructions.***

You may now reverse the disassembly instructions to reassemble. You will no longer use the T8 screws in the center of the bottom case to attach the board which are marked in yellow in the picture below.

**** * This section is only needed if you don't achieve green lights on your first attempt. Some units (5-10%) are more stubborn than others and will need a bit more attention. If this is the case with your particular unit, double check your screw torque and let's proceed to overheat the unit a bit longer using the following instructions.**

Alternative X-Clamp Repair Bake:

From the testing process above, everything should already be plugged in but not completely re-assembled. This alternative bake will focus more on the GPU. The idea here is to overheat the GPU for 10-15 minutes. To accomplish this, we will need to keep the CPU as cool as we can to prevent the thermosistors from kicking in and shutting the system down.

Let's start:

Take the plugged in fan and sit it on top of the DVD drive and have one of the fans sitting over top the CPU (CPU has the tall copper heatsink). This should keep the CPU cool while we overheat the GPU. In addition, you could also use a hairdryer set on "cool" and blow it at the CPU along side the fan too.

Go ahead and power the unit on at this point and let it run at least 10-15 minutes. What you want to keep an eye on is the lights. If you see the 3 Red Lights that good. The three red lights will be in sections 1,3 and 4. If you start seeing two red lights in sections 1 and 3 then the CPU is not being kept cool enough. When this happens, the 360 shuts off power to the CPU and GPU and thus prevents it from getting hot.

Assuming everything went fine with the 10-15 reflow then go ahead and shut the unit off and let it completely cool down. About 15 minutes of cool down should be good.

After the cooling down period, test for green lights again. If it still doesn't work at this point, re-tighten the screws a bit more and repeat.

If your unit still does not want to cooperate, all hope is not lost. We offer free personalized support on our repair forum and there are several other repair measures (12 cent trick, heat gun reflow, etc.) you can try. Feel free to stop by the repair forum for additional help or to provide help for others.

http://discussion.thecoupondepot2006.com/

3RedLightFix