



# Power Mac G5 Processor and Cooling Unit Replacement

Written By: Nolan



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## INTRODUCTION

This will overview the process to remove and replace the Cooling and Processing unit of the Apple G5. Due to design restrictions of the device it is difficult replace the just processors without permanently damaging the entire unit. So this portion of the guide will only overview removal of the entire unit.

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### TOOLS:

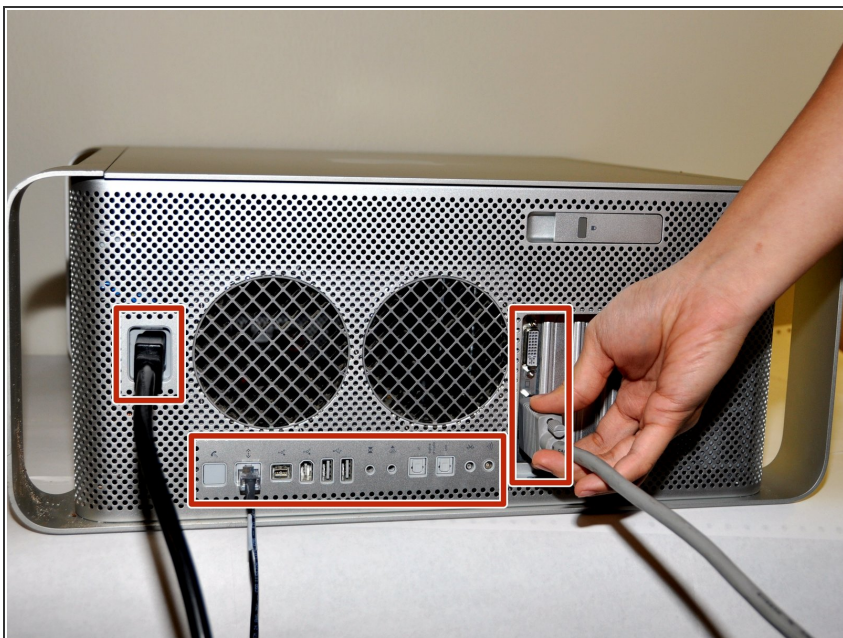
- [T10 Torx Screwdriver](#) (1)
  - [2.5 mm Hex Bit](#) (1)
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## Step 1 — Side Panel



- ⚠ To avoid electrocution, shut down the computer. Do not open the computer or attempt to install any items inside it while the computer is on.
- ⚠ To avoid being burned, wait at least 10 minutes to allow the computer's internal components to cool.

## Step 2



- Remove all the cables, including the power cables before opening the unit.



## Step 3



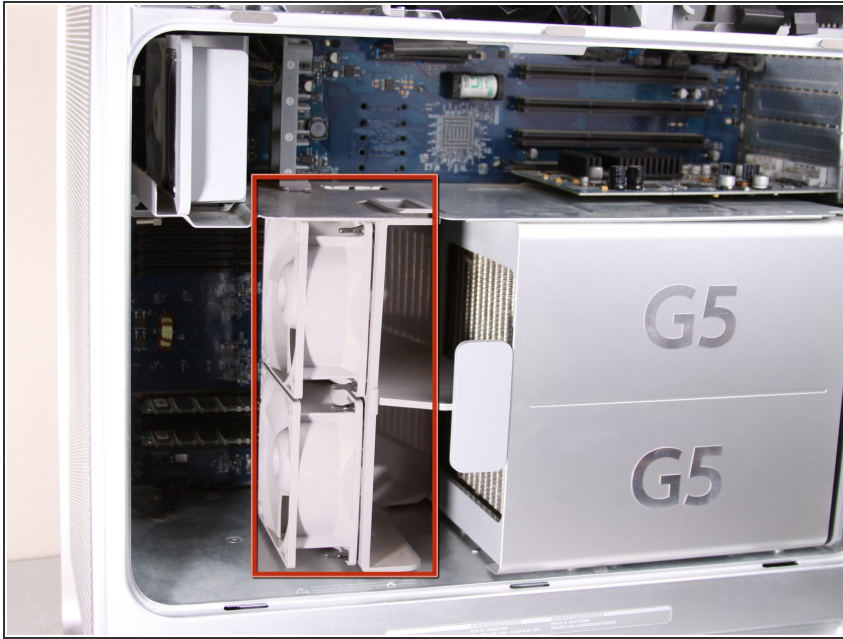
- Lift the tab to unlock the side panel.
- ⓘ The panel should fall out. If the panel does not fall out by itself pull a little from the edges.

## Step 4



- Remove the air deflector (the clear plastic cover) by pulling on the handle.

## Step 5 — Front Fan Assembly



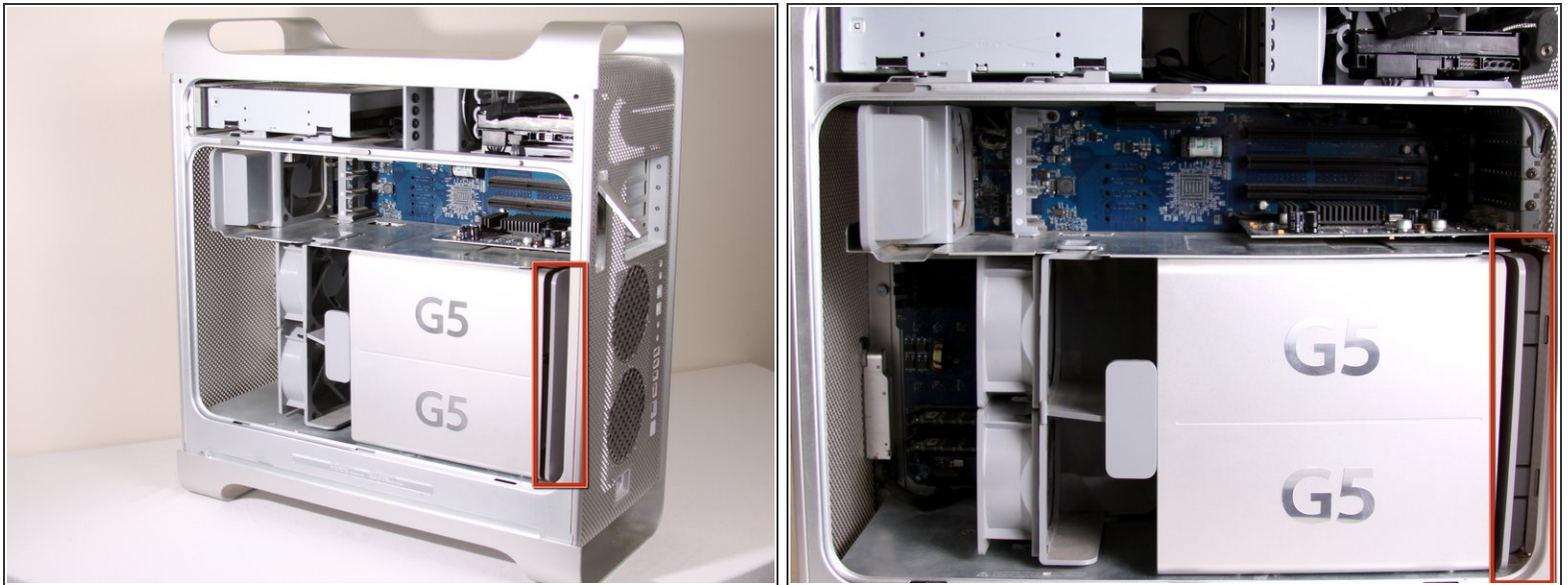
- Locate the front fan assembly.

## Step 6



- Pull the fan assembly out; it should slide out easily.

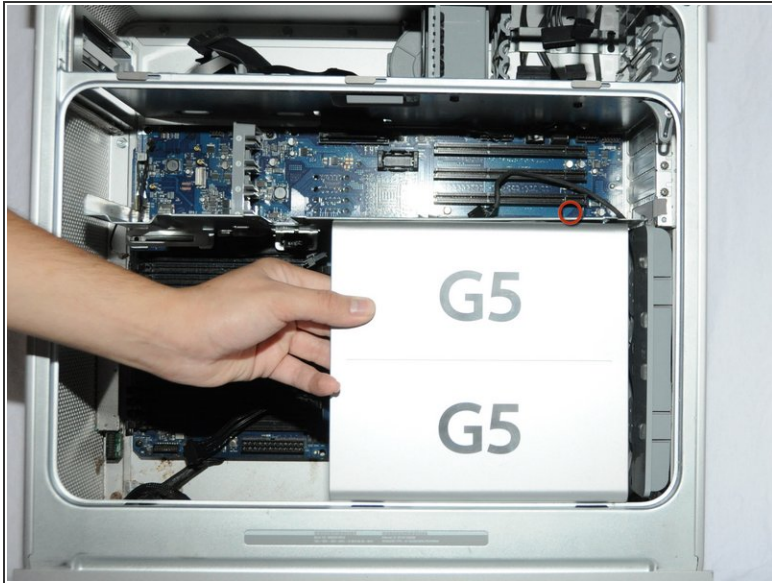
## Step 7 — Bottom Right Cooling Fan Unit



- The cooling fan unit is located on the bottom right of the Apple G5 Desktop.

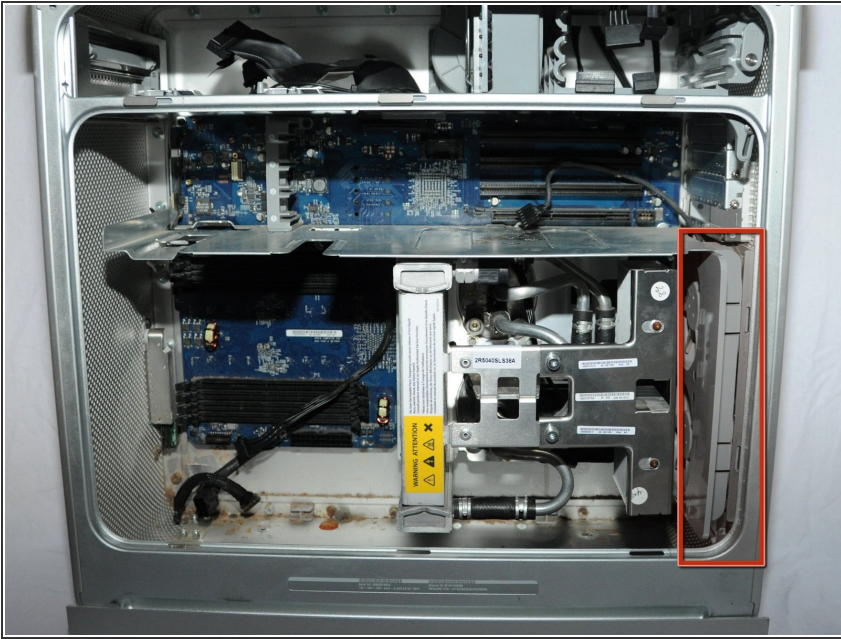


## Step 8



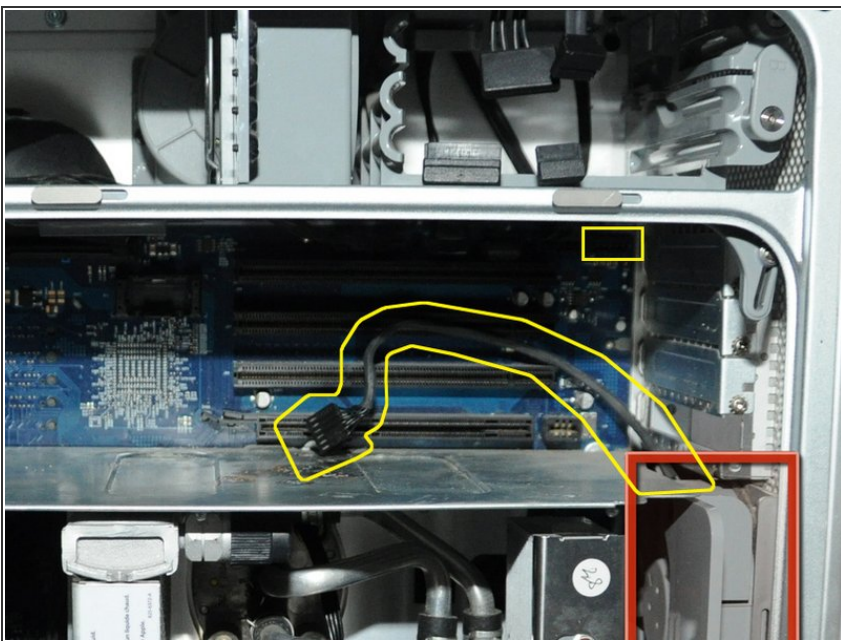
- Remove the G5 metal cover from the processing/cooling unit of the computer. NOTE: Apple inserted a rather fragile plastic pin that inserts through the top divider shield and clips into a tab on the hidden ledge of this CPU shield. Removing this pin, certainly voided Mac's warranty - but more appropriate for now, voids most after-market insurance plans. A replacement pin (new) is hard to get ahold of, and very few are talented and patient enough to remove this pin without damaging it. Just something to keep in mind. If you have no warranty any longer or don't care, please continue...
- Pull the metal plate to the left and outward to remove the plate from the processing/cooling unit.

## Step 9



- Locate the bottom right fan.

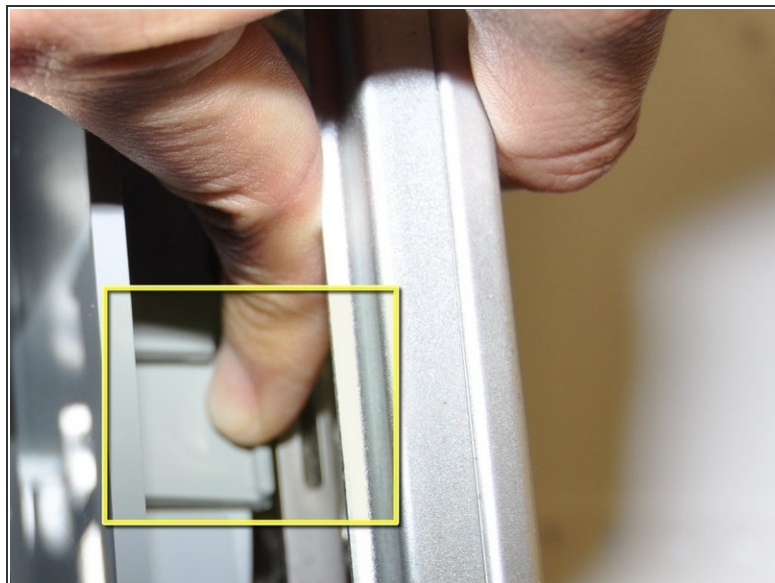
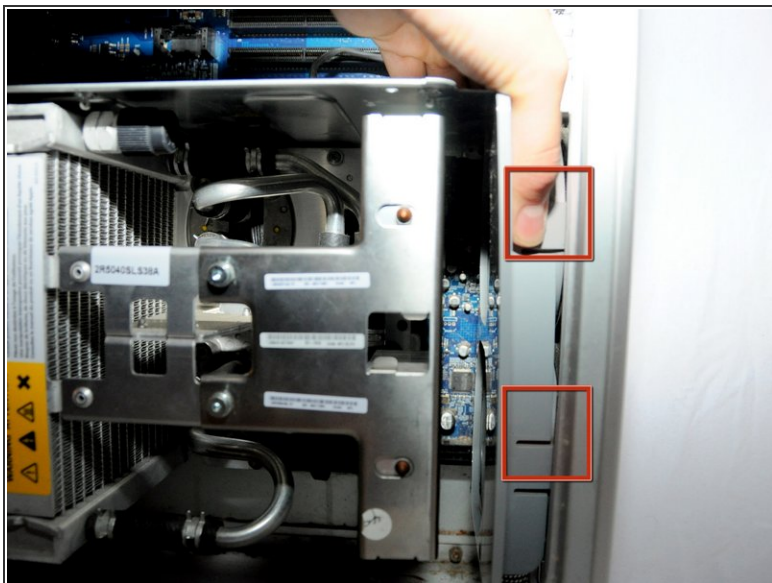
## Step 10



- Unplug the fan's power cable from the upper rightmost corner of the motherboard (connection J45). If there is a video card in place, carefully pull the cable plug down between the back edge of the video card and the motherboard. Note, the photo shows the unplugged cable and the area it plugs into outlined in yellow. No video card is shown in this photo.

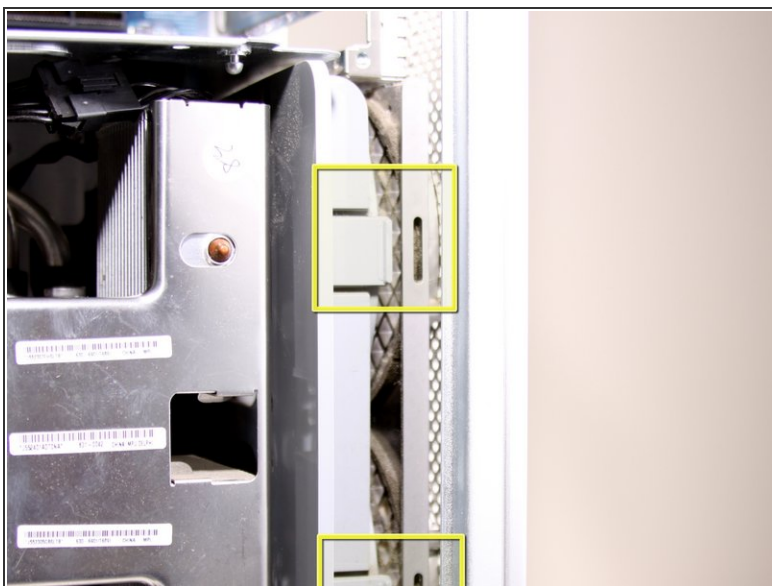


## Step 11



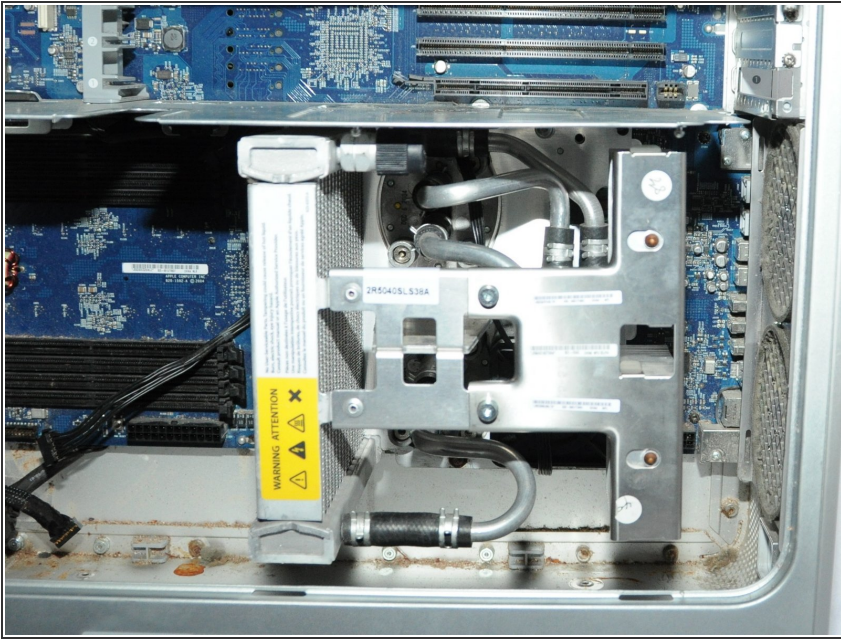
- Locate the tabs on the fan unit.
- While pushing in on the tabs, highlighted in yellow, pull the fan back towards the cooling unit.

## Step 12



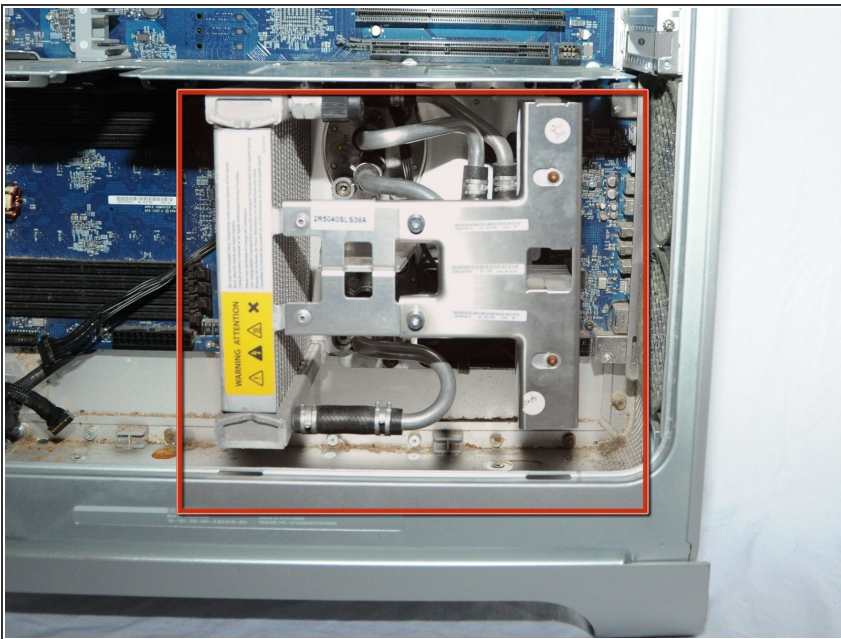
- After the latches are out, pull the fan out.

## Step 13



- After removal of the bottom right fan the space should look like this.

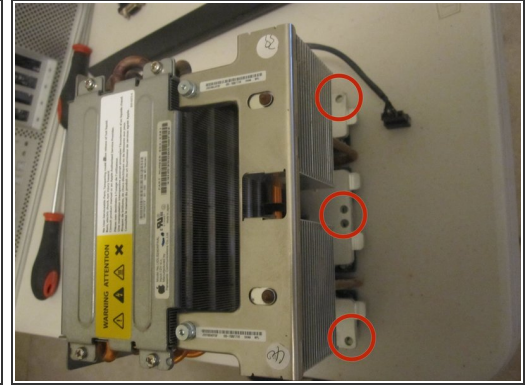
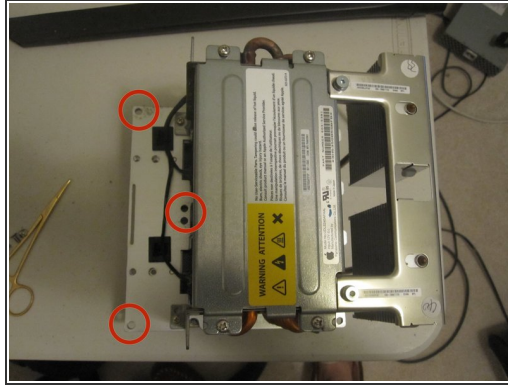
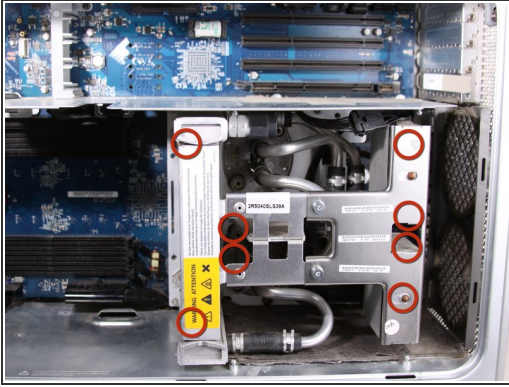
## Step 14 — Processor and Cooling Unit



- Locate the Cooling Unit on the Apple G5.
- Put the CPU case on its back with the opening facing up to make the next steps easier.



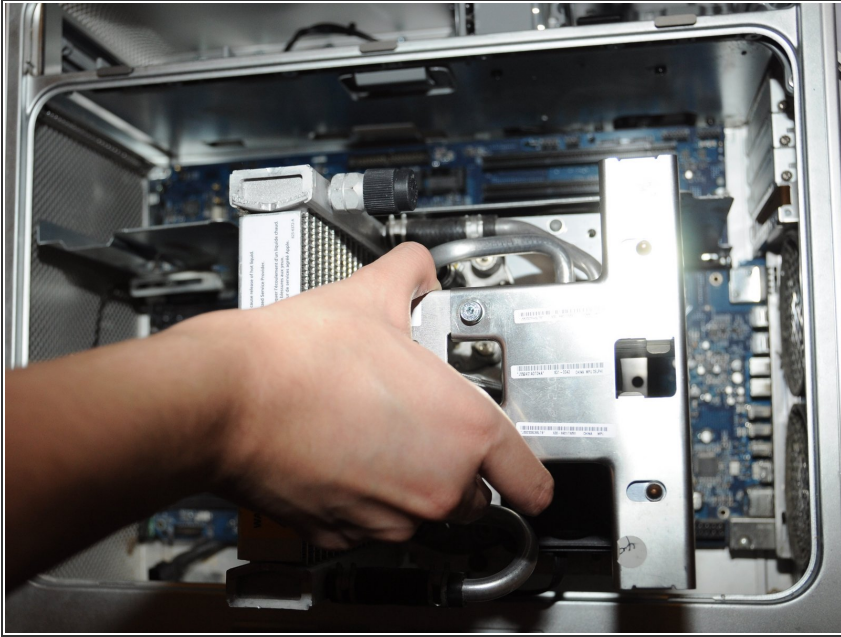
## Step 15



- Unscrew 8 T10 screws from the cooling unit. NOTE: these screws are actually allen keys. The preferred tool will be long handled allen keys. t10 are 2.74mm (closest allen key is 2.5 or 3mm) and t15 are 3.27mm(closest allen key is 3mm and 4mm). You may strip your tool or the actual screws themselves. Use a set of high quality long handled allen keys.
- ⓘ The screws are somewhat hidden, so they cannot be seen in the picture.
- ⓘ To visualize the location of the screws look 3 steps ahead.
- The screws will loosen but will not come out, they are designed to loosen the unit, but remain in place.
- The last two images show another version of the LCS (out of the computer) in the G5 with off-center views to show the 8 screw holes.

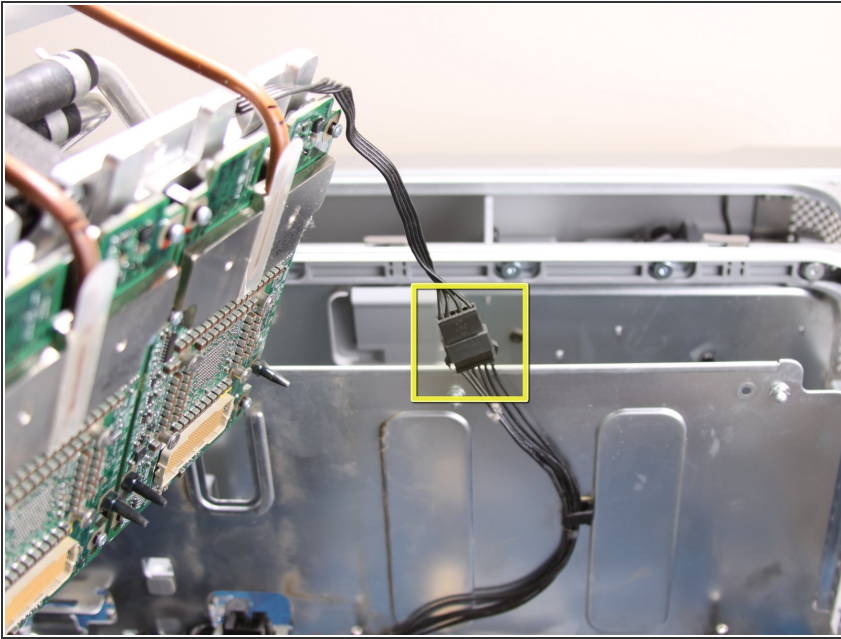


## Step 16



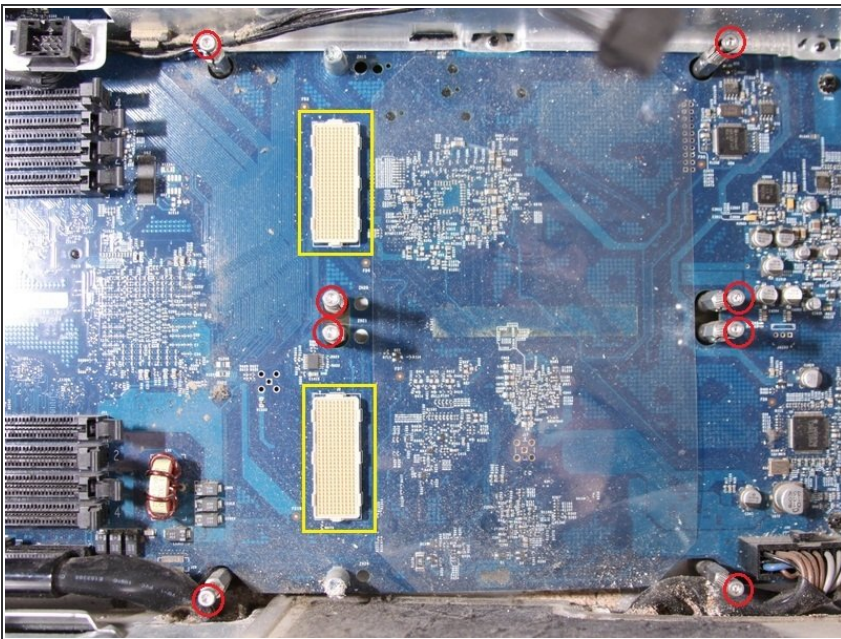
- Pull the cooling/processing unit straight up to prevent damage to logic board
- ⓘ This will require some effort and should be done with caution to avoid damage.
- The sleeves around the 6 screws may hold it in, if so just take a pair of needle nose pliers and gently squeeze the sleeves until it releases.
- Pull the bottom, then side towards the bottom of the CPU case, first to move around the bottom coolant sleeve around the heat sinking bracket. \*heat sinking bracket not in picture\*

## Step 17



- Disconnect the cable.

## Step 18



- NOTE: Here are the standoffs without the cooling unit installed to make it easier to understand where

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the screws are located. Remove the bottom 2 standoffs so it is easier to remove the power supply.

- Check the pin connections for any damage. All the pins highlighted in yellow should appear straight up and not appear bent. **DON'T TOUCH THE PINS.** A bent pin will result in your computer not powering on.

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To reassemble your device, follow these instructions in reverse order.