



# eMac Motherboard Assembly Replacement

This guide shows how to remove and replace the motherboard for an eMac.

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## INTRODUCTION

The eMac motherboard assembly can be separated from the rest of the computer to all access to the hard drive.

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### TOOLS:

- [Phillips #2 Screwdriver](#) (1)
  - [2.5 mm Hex Key](#) (1)
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## Step 1 — Door Removal



- It should be noted that these guides are written based on a late-model eMac (2005, 1.42GHz, DDR). They will differ slightly from the older model eMacs that use PC-133 RAM.
- Lay the eMac screen-down on a flat surface. I've found it convenient to use a carpeted floor because the computer is so heavy.
- Remove the single phillips #2 screw on the RAM door, and remove the door
  - The screw is captive in the door, so don't worry about losing it.

## Step 2 — Bottom Screw Removal



**⚠** Before starting this process it's important to note that the eMac can have some seriously dangerous voltages inside of it, thanks to the CRT display. Before working on an eMac, you should unplug it, press the power button to clear any stored charge on the motherboard, and then let it sit for 24-hours (or more) to allow the CRT to discharge.

- You can read more about CRT safety procedures [here](#). If you aren't experienced with working on devices featuring a CRT, it's recommended that you don't proceed any further.
- On the bottom side of the eMac, remove the following screws:
  - A single 2.5mm hex screw
  - Two #2 phillips screws

### Step 3 — Top and Side Screws



- Remove two 2.5mm hex screws from each of the other sides of the computer.

### Step 4 — Power Button Cable



- Now, the shell can almost be separated from the computer.

**⚠ There is a cable that connects to the power button. This must be disconnected before removing the housing completely.**

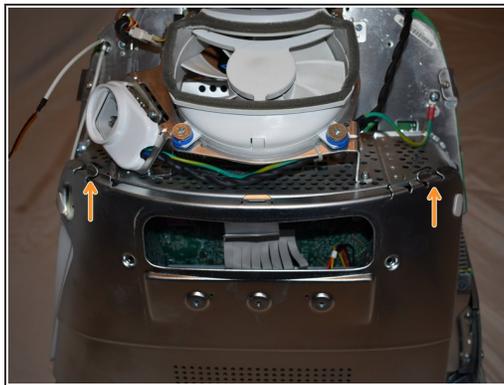
- Lift the housing enough to allow you to fit your hand through the access door, and disconnect the cable at the power button.

## Step 5 — Shell Removal



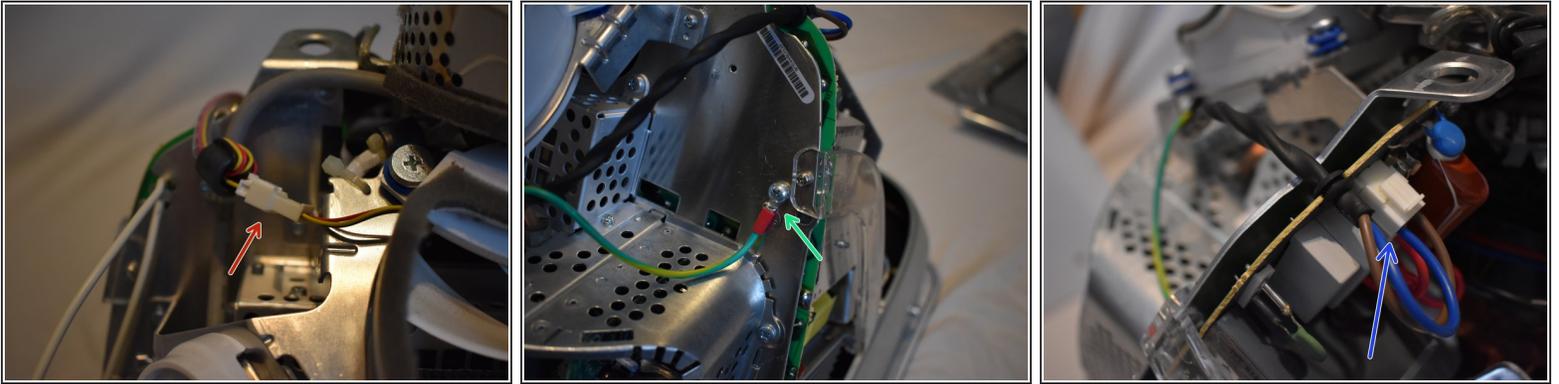
- Now the entire shell can be removed from the computer.

## Step 6 — Panel Removal



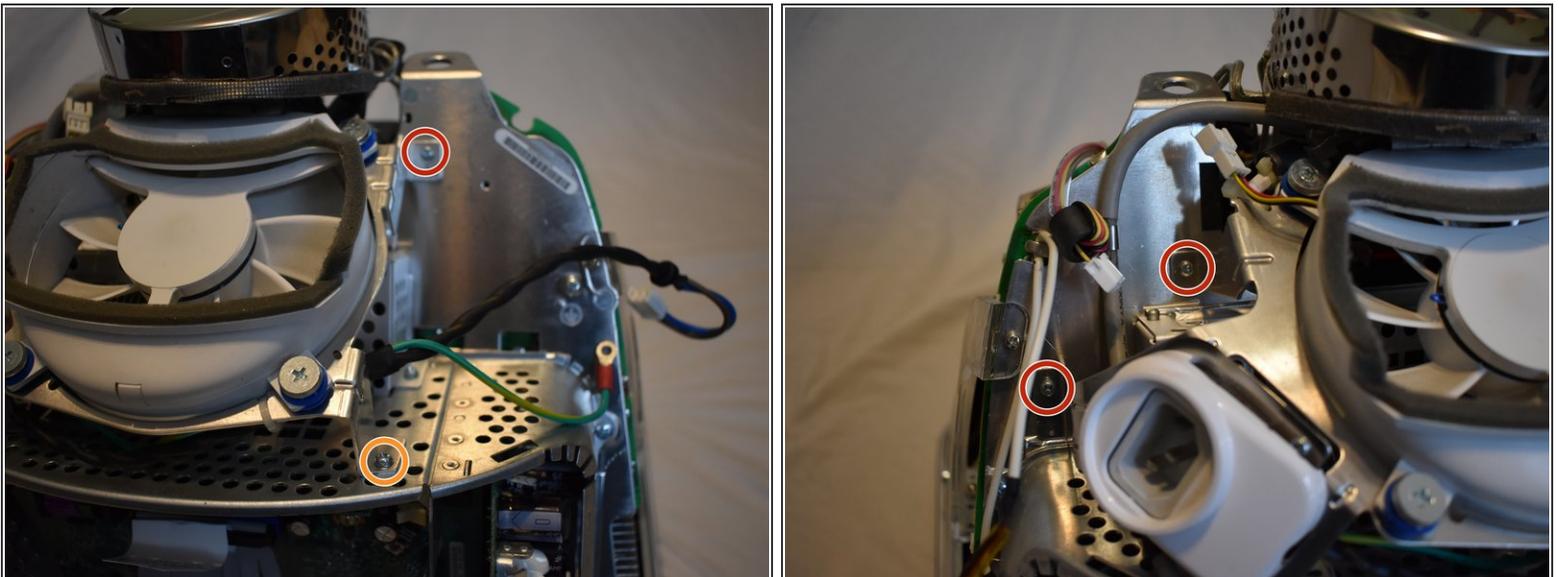
- The motherboard access panel is held on by 4 phillips #2 screws.
- Remove the screws, then use your fingers to pull on the top tabs to separate the panel from the computer frame.

## Step 7 — Cables



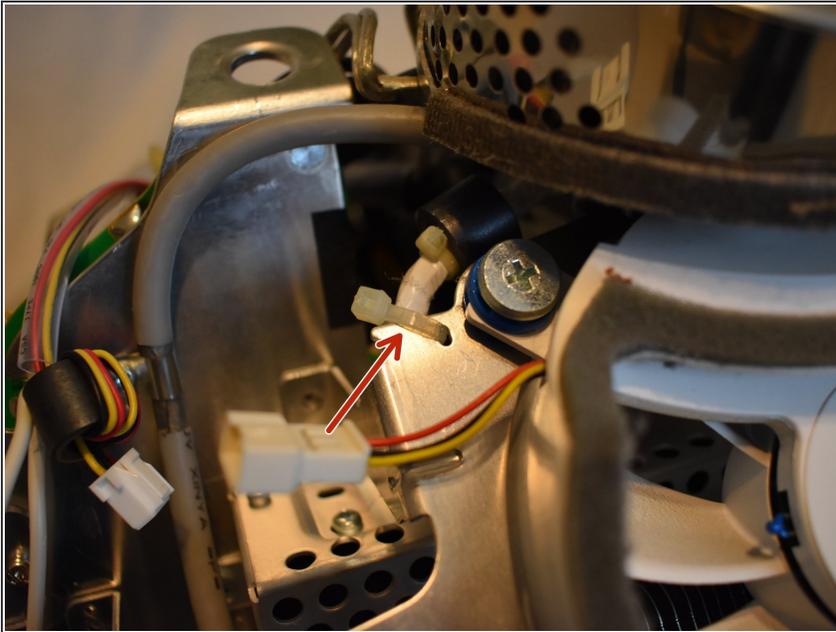
- To remove the fan assembly, several cables must be disconnected first:
  - 3-pin fan cable
  - Ground wire, requires phillips #2 screwdriver
  - 2-pin AC cable to power supply

## Step 8 — Screws



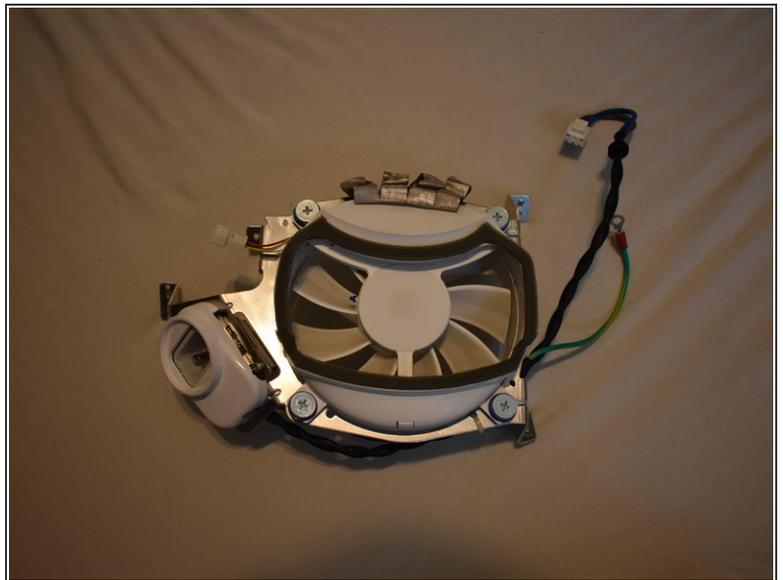
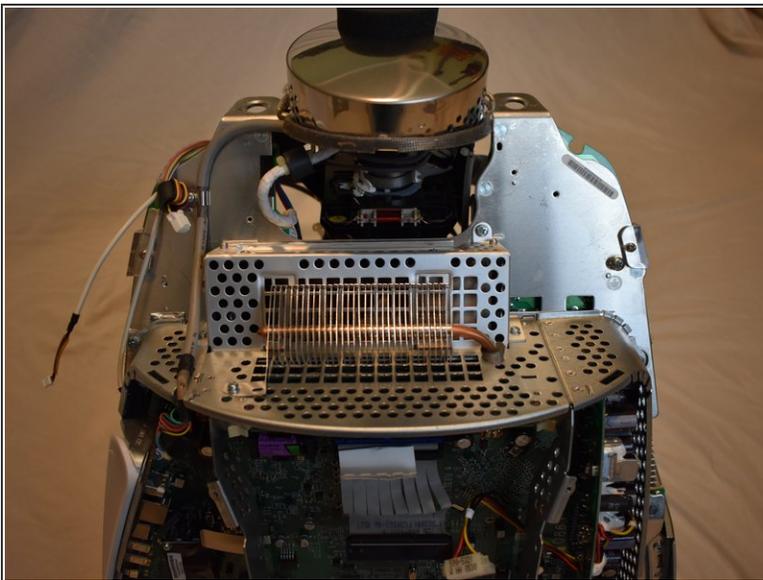
- Now remove the following screws securing the fan assembly:
  - 3x coarse thread phillips #2
  - 1x machine thread phillips #2

## Step 9



- There may be a zip tie holding another cable to the fan assembly, cut it to remove the fan assembly.

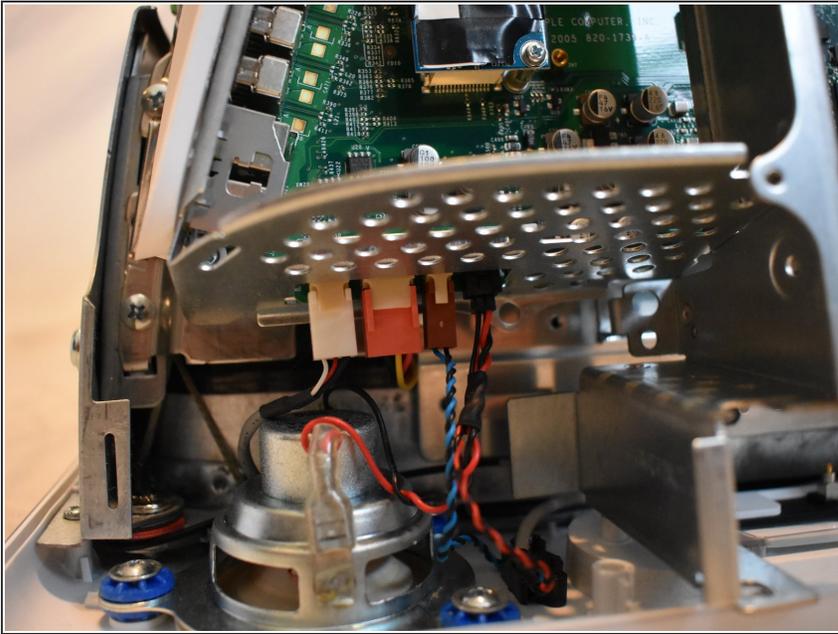
## Step 10 — Assembly Removal



- You should now be able to remove the fan assembly.

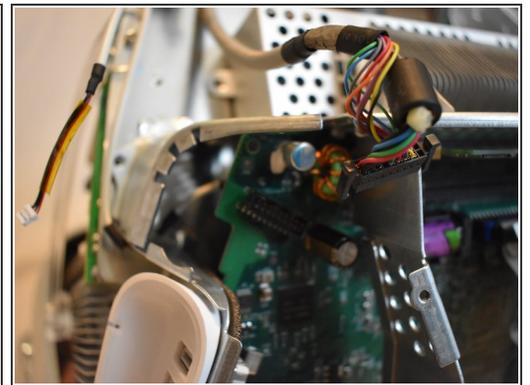
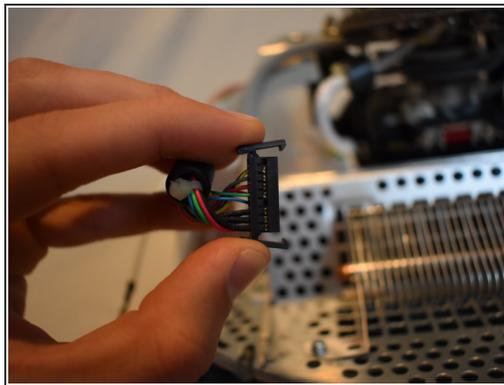
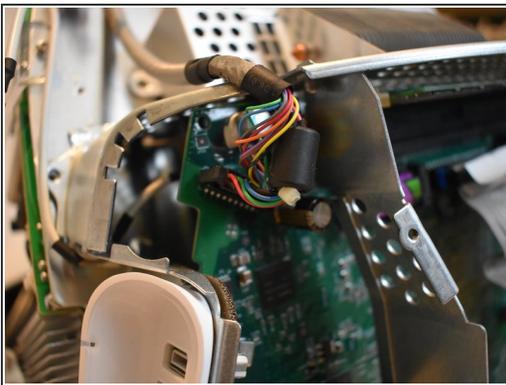
**⚠** Doing this will expose more of the CRT neck, be careful not to touch this area because it can contain high voltages (and is fragile)

## Step 11 — Bottom Connectors



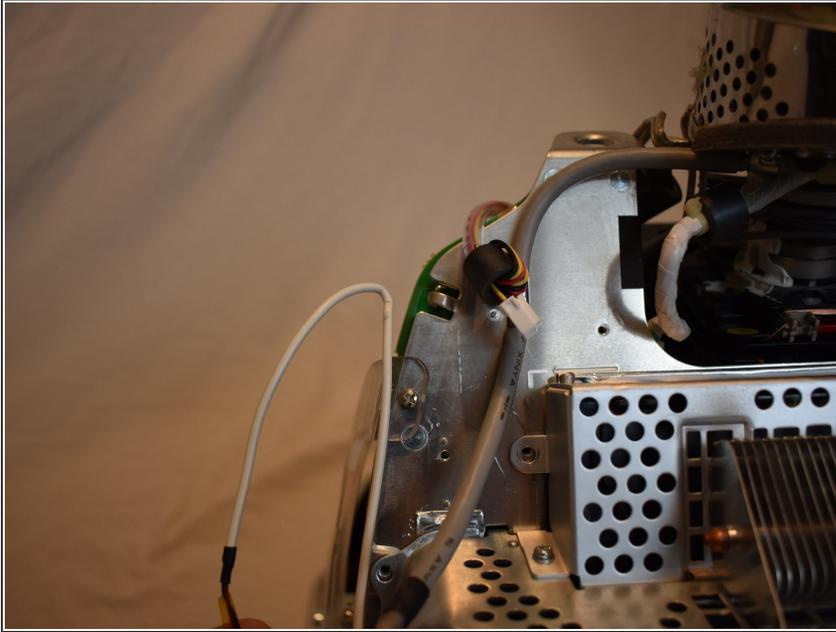
- There are four connectors at the bottom of the motherboard that must be removed.

## Step 12 — Display Connector



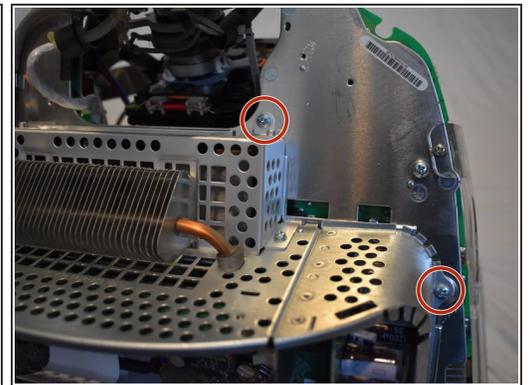
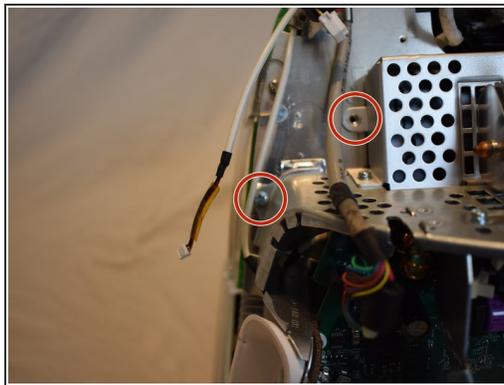
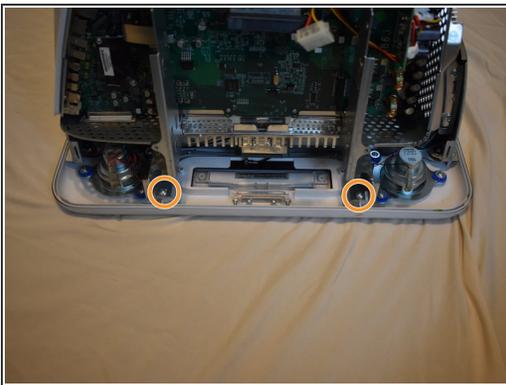
- There is a large display connector that must be removed. This can be done by squeezing the tabs and pulling.

## Step 13 — Power Button Cable



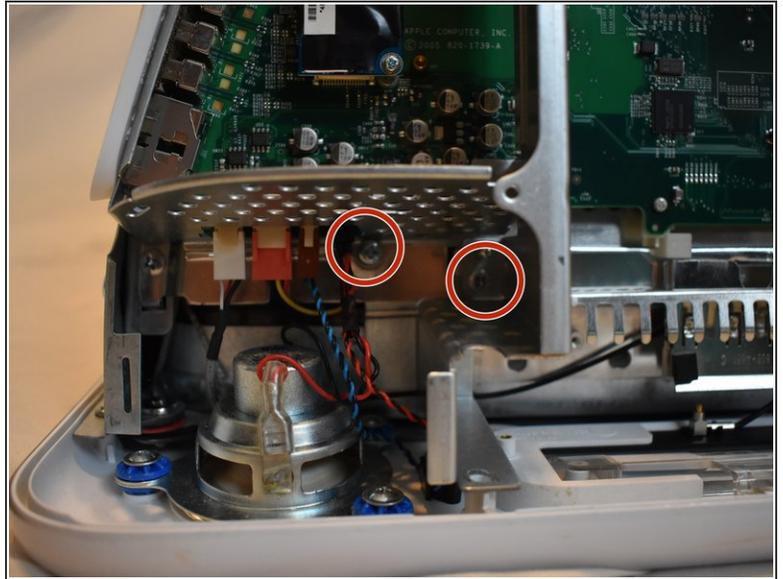
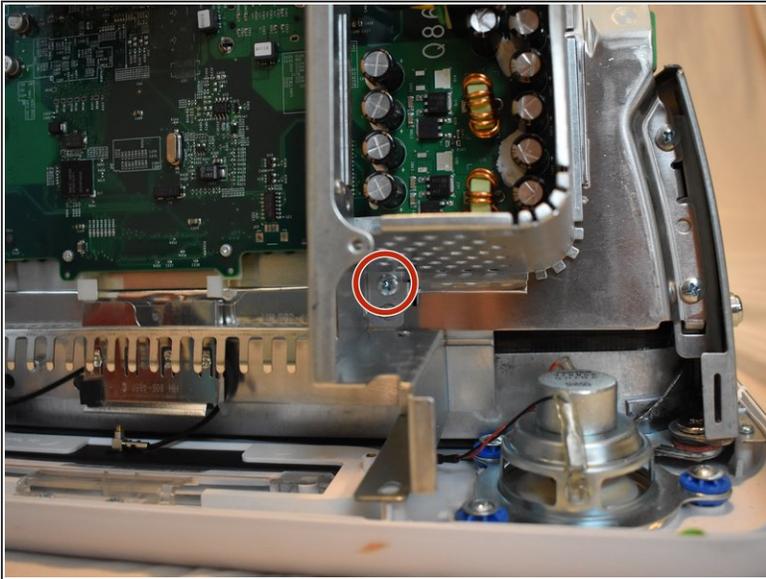
- The power button cable may be tucked in the casing, you will need to un-tuck it.

## Step 14 — Screws



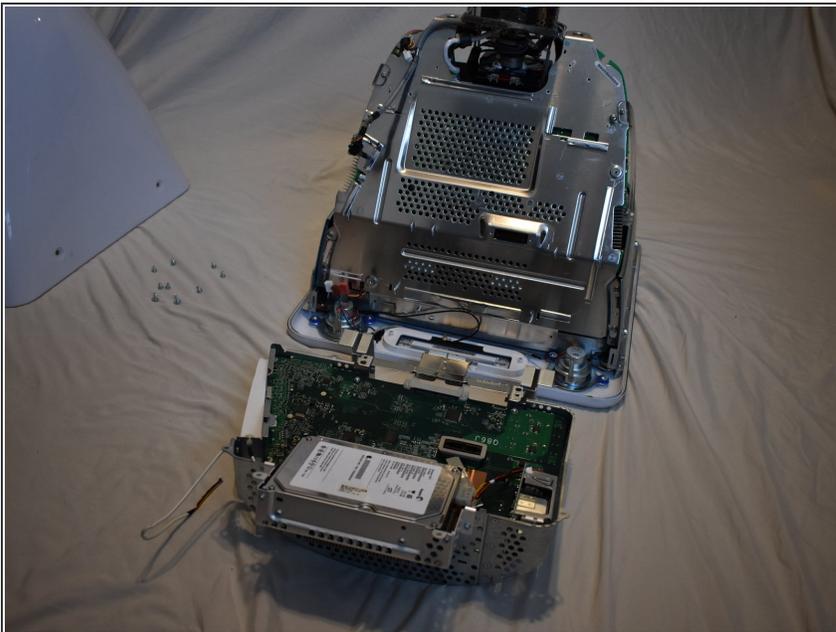
- There are several phillips #2 screws that hold the eMac motherboard assembly to the rest of the computer. They will all need to be removed.
  - 2 large ones near the drive bay door.
  - 7 smaller ones scattered around

## Step 15 — Screws (Continued)



- More of the screw locations from the previous step

## Step 16 — Motherboard Assembly



- The motherboard assembly should now come free.

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