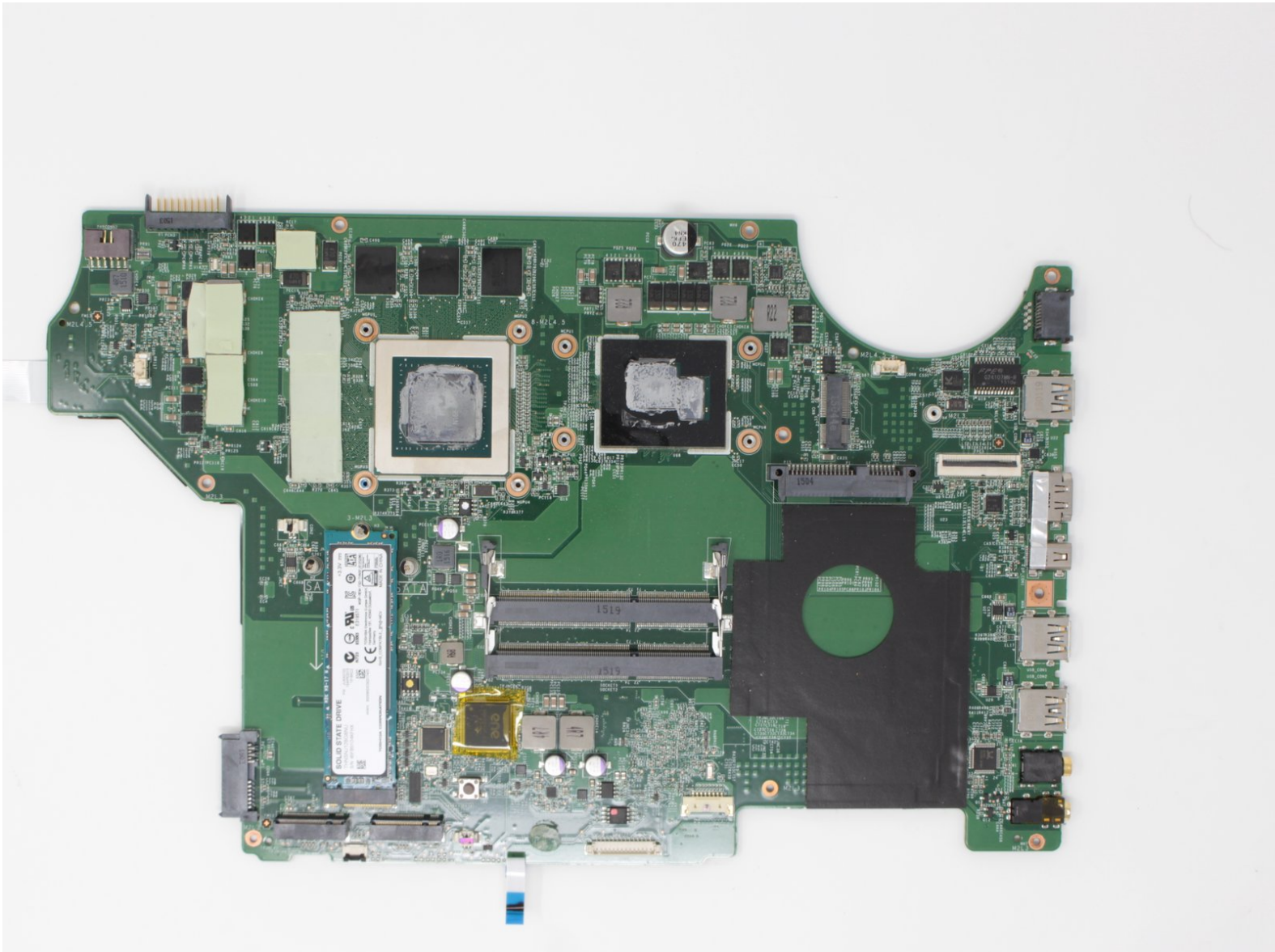




MSI GE72 6QF Apache Pro Motherboard Replacement

This guide demonstrates how to replace the Motherboard for the MSI GE72 6QF Apache Pro

Written By: Riley Smith



INTRODUCTION

It is recommended when doing this guide to be very meticulous when disassembling the laptop to remove the motherboard. There are some connectors that may be fragile, so use caution when disconnecting some components.



TOOLS:

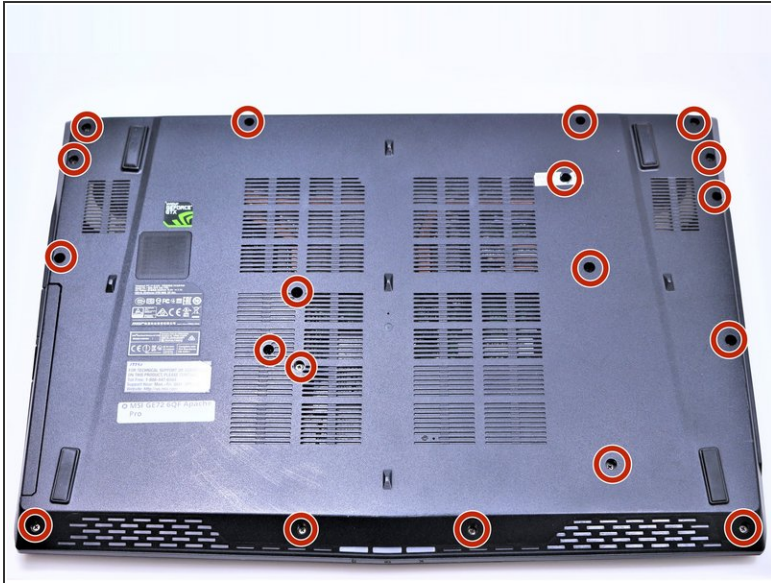
- [Phillips #0 Screwdriver](#) (1)
- [Spudger](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Phillips #1 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)



PARTS:

- [504HQ002806 Optical drive](#) (1)
- [MSI BTY-M6H Battery](#) (1)

Step 1 — Battery



⚠ Make sure the laptop is off and unplugged (not charging).

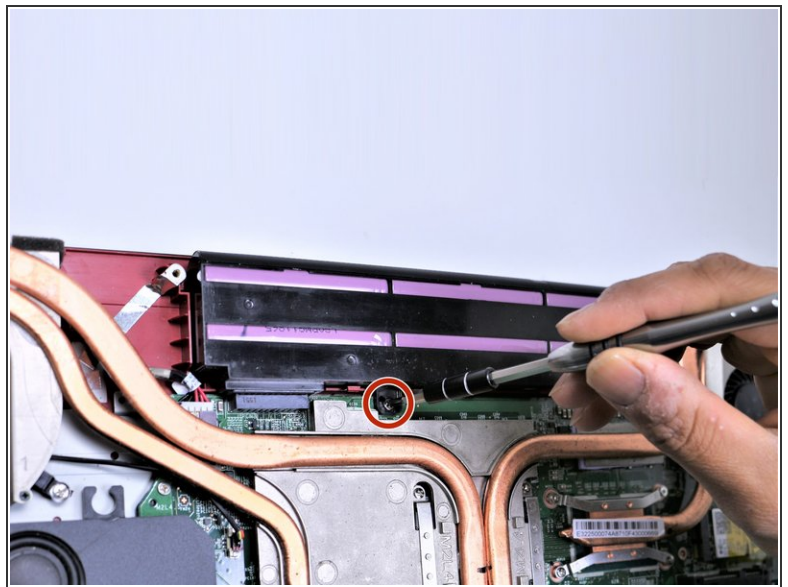
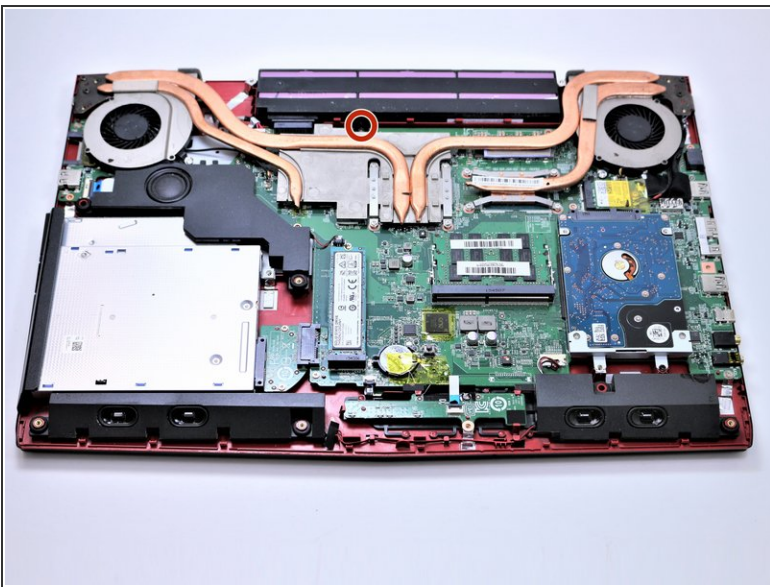
- With the laptop closed and upside down, unscrew the nineteen 5.5mm Phillips #1 screws that keep the back cover in place.

Step 2



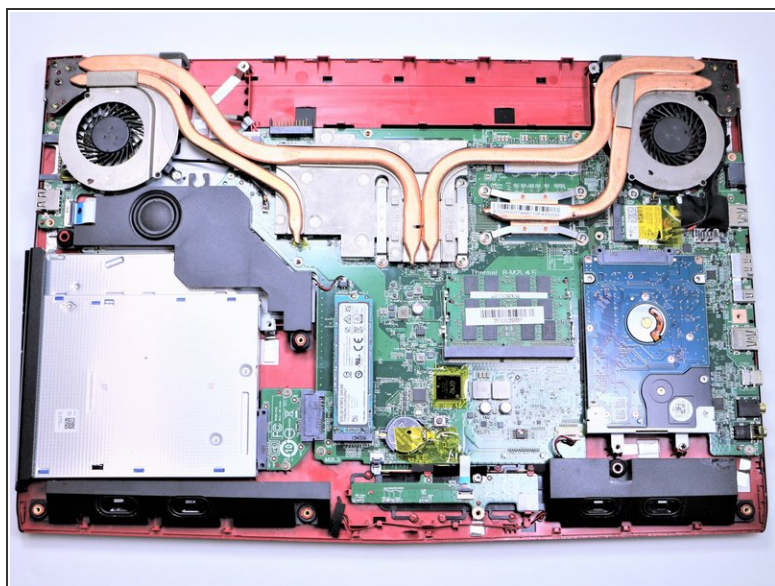
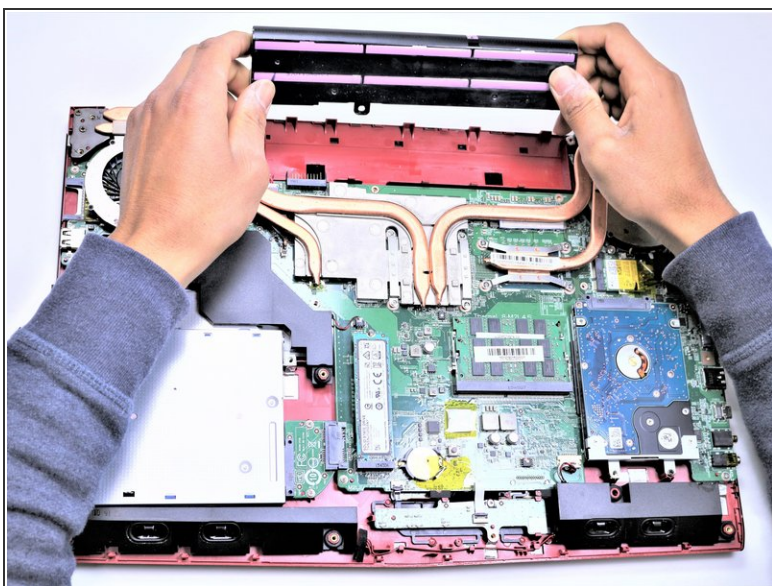
- Using your fingers, gently loosen the edges of all four sides of the back cover.
- Gently pull off the back cover.

Step 3



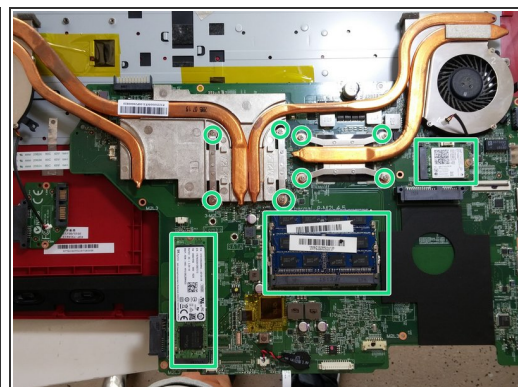
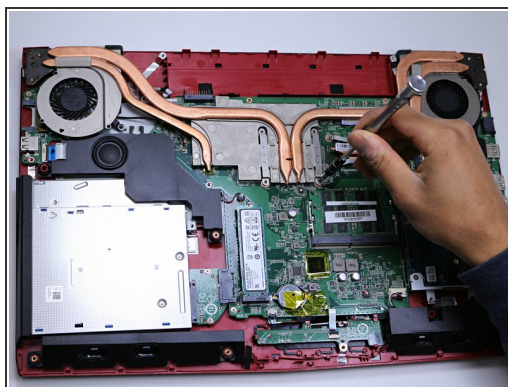
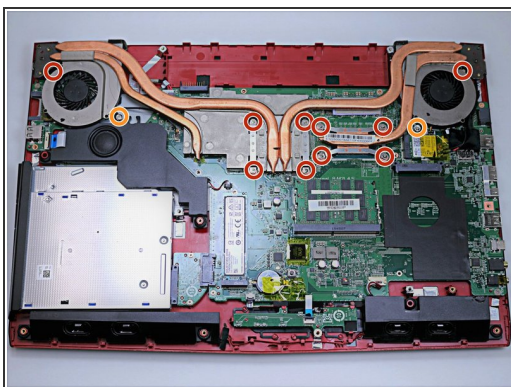
- Unscrew the single 5.5mm Phillips #1 screw keeping the battery secure.

Step 4



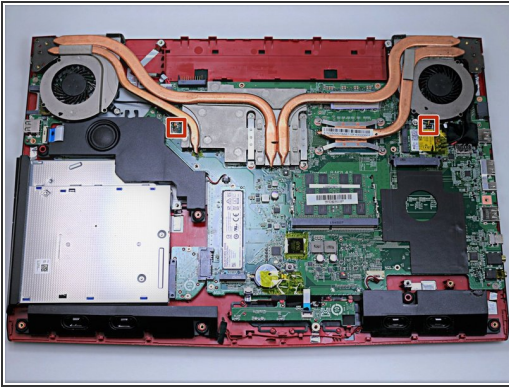
- Grab the battery with your fingers and gently pull it up and away from the rest of the laptop.

Step 5 — Fan



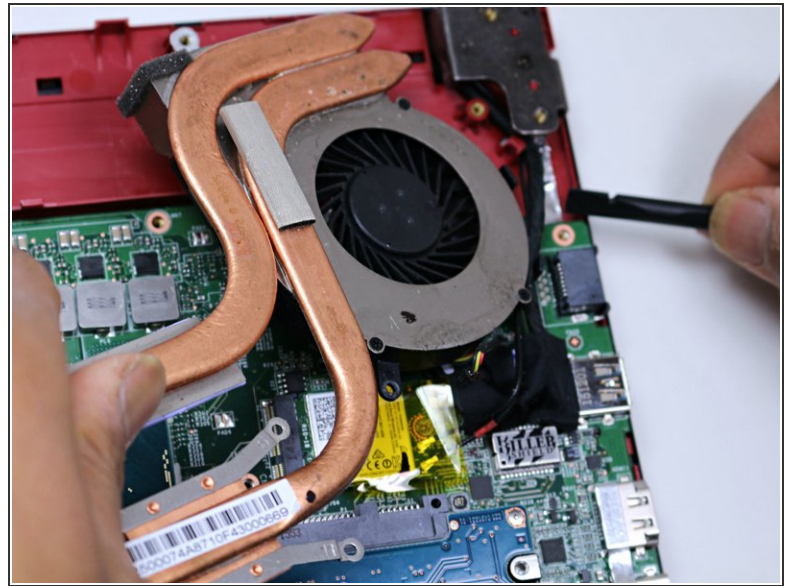
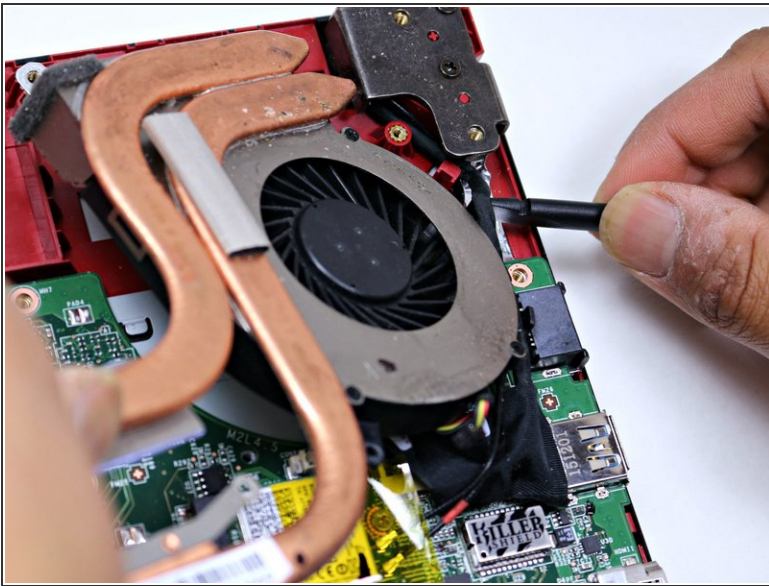
- ⓘ If you are replacing only the keyboard, you can skip to step 18, and then skip the WiFi adapter removal step. The CPU fan, m.2 SSD, RAM and WiFi adapter (marked in green) will all come off with the main board, giving you access to the keyboard.
- Use a Phillips #1 screwdriver to remove the ten 5.5mm screws.
- Remove the last two 5.5mm Phillips #1 screws, and remove the washers around them.

Step 6



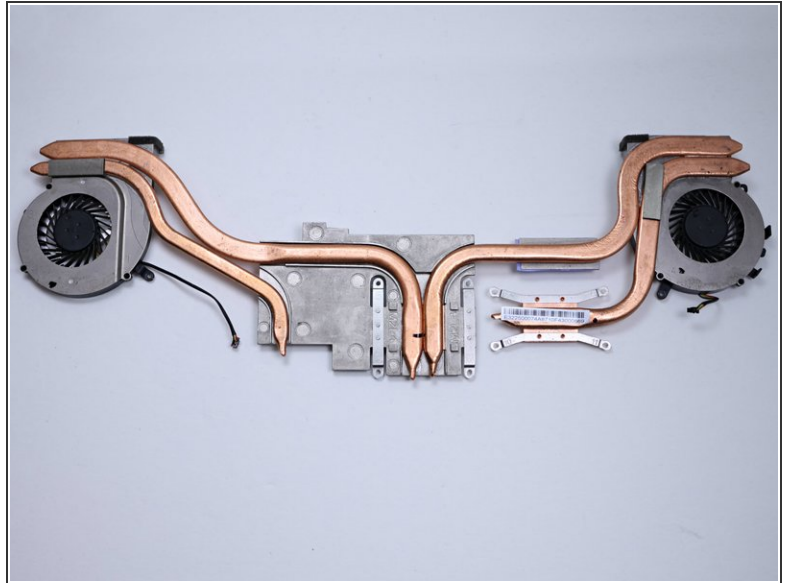
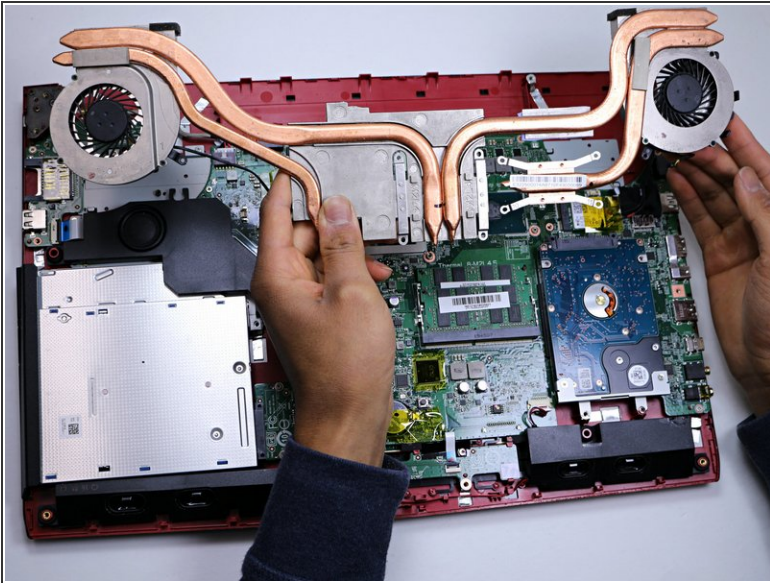
- Unplug both of the fan power cords from the laptop using a spudger.

Step 7



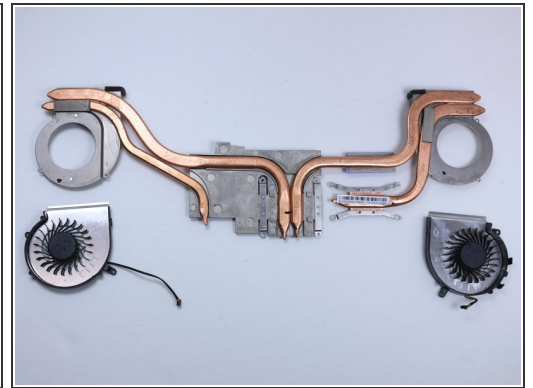
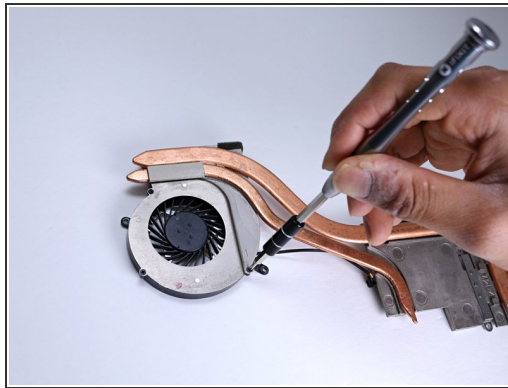
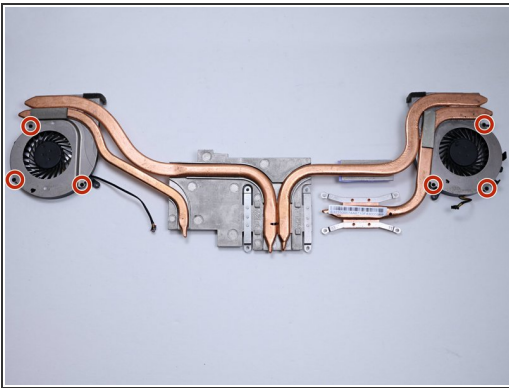
- Continue to use the spudger to carefully separate the wires of the power cord from the laptop.

Step 8



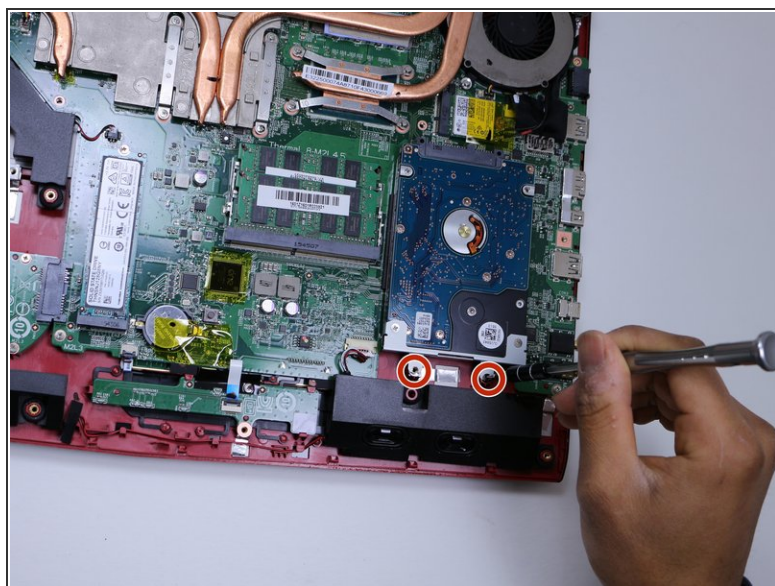
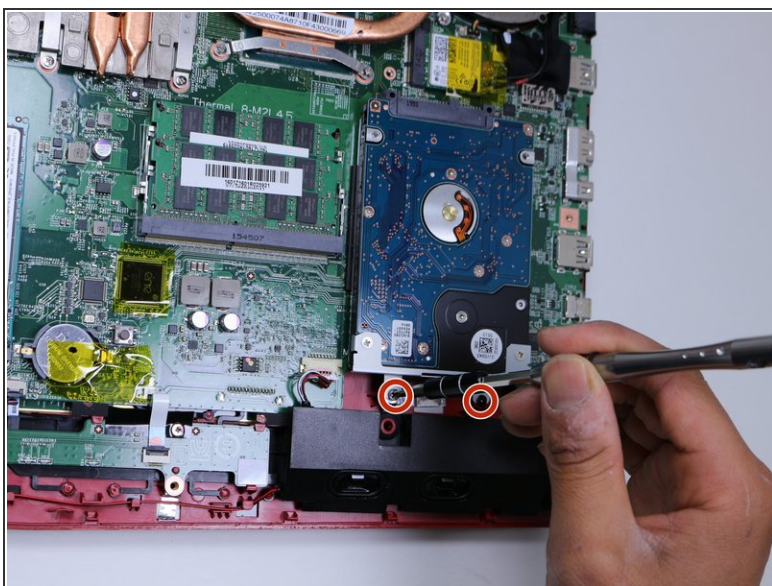
- Fully remove the fans from the rest of the laptop.

Step 9



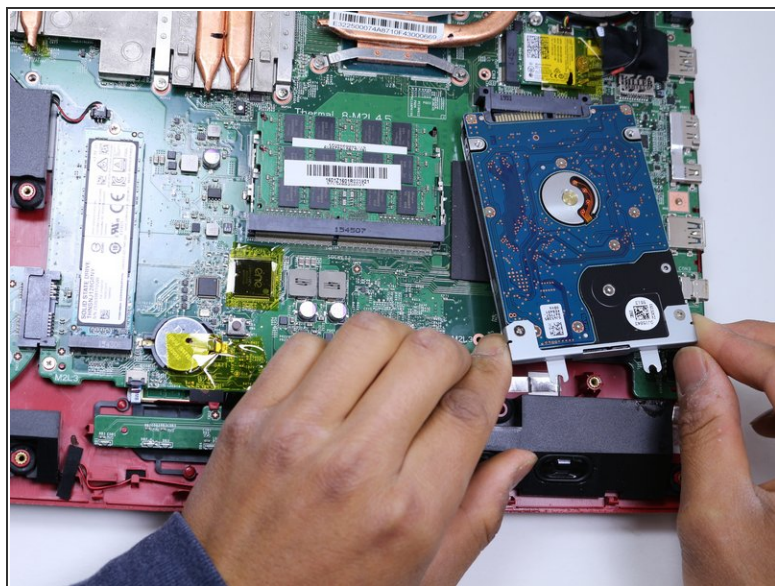
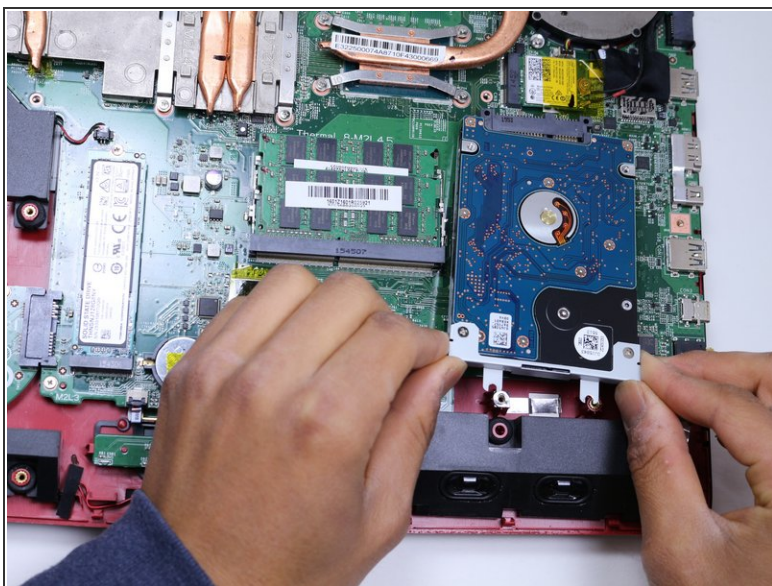
- Using a Phillips #00 screwdriver, remove the six 5mm screws.
- Separate the fans from the silver fan covers.

Step 10 — Hard Drive



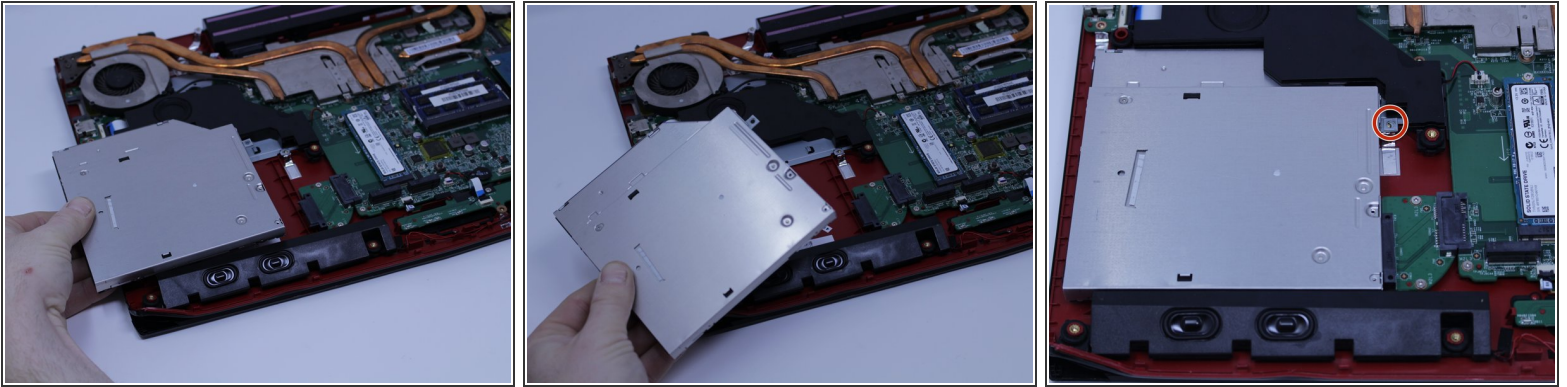
- Remove the two 5.5mm screws with the Phillips #1 screwdriver.

Step 11



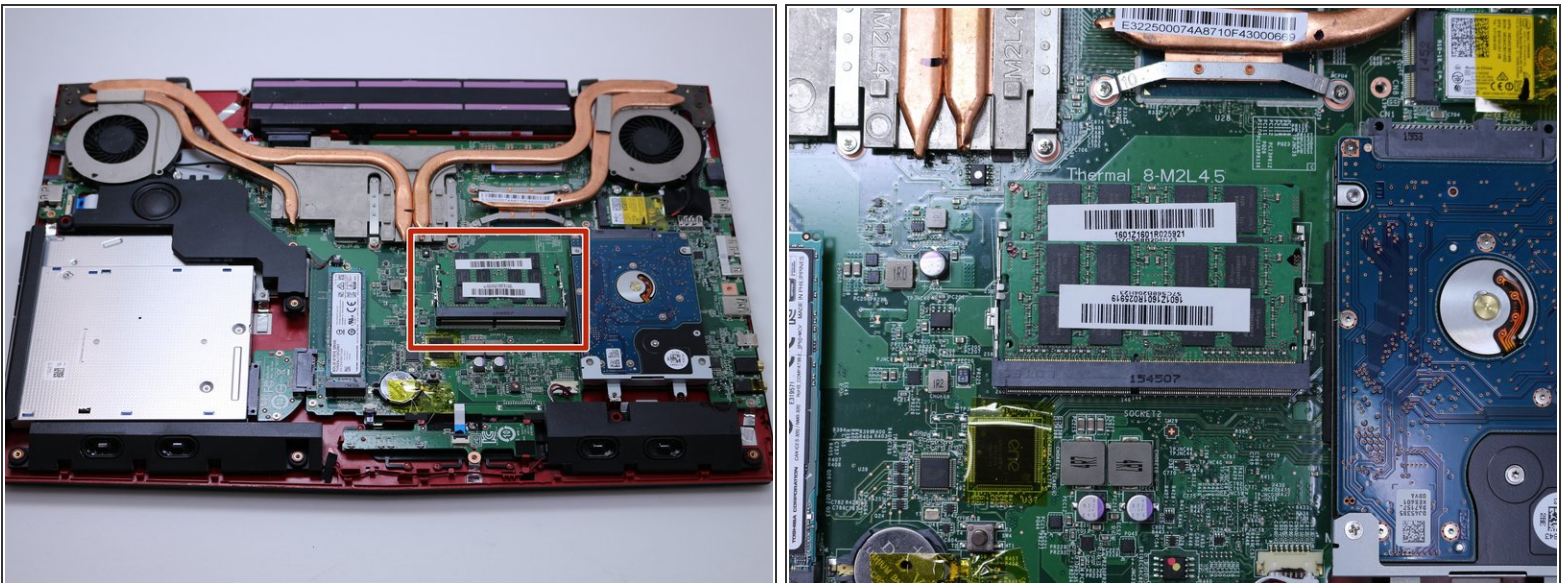
- Gently pull out the hard drive by wiggling it from right to left with your hands until it is removed.

Step 12 — Optical Drive



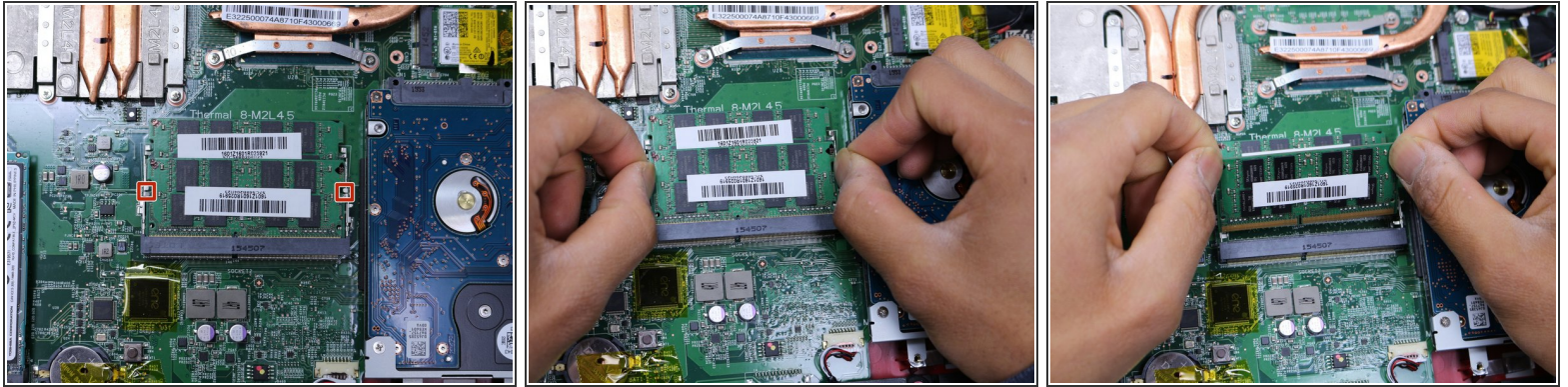
- Carefully slide the Optical Drive off of the SATA connector.
- The red marker shows the location for where the retaining screw comes through the back panel to hold the Optical Drive.

Step 13 — RAM



- When you open the back cover, the RAM will be located as shown in the picture.

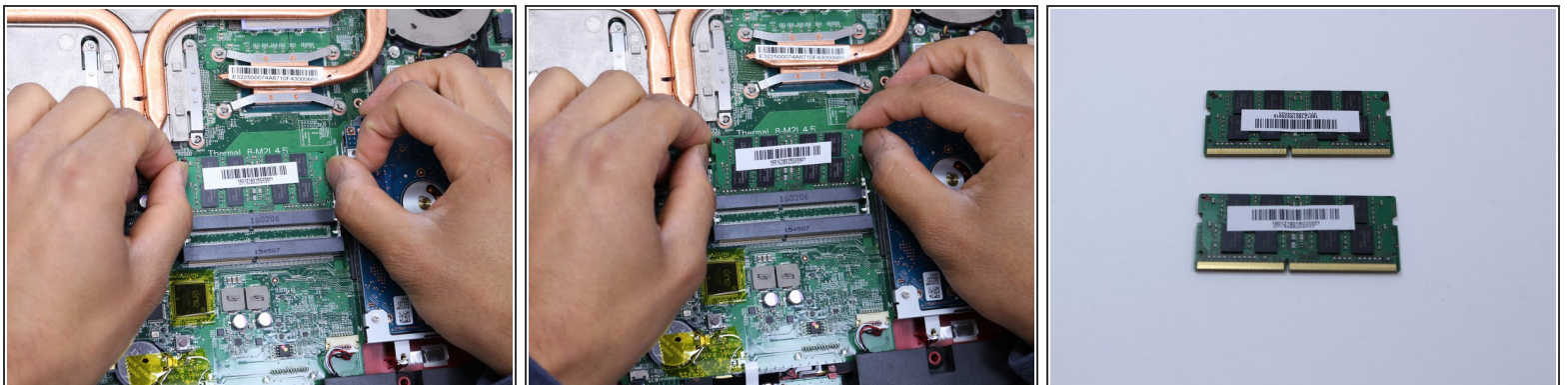
Step 14



- Press the hinges on the sides of the RAM chip as shown in the picture, in order to unlock it.
- Carefully, slide it out at a 45 degree angle.

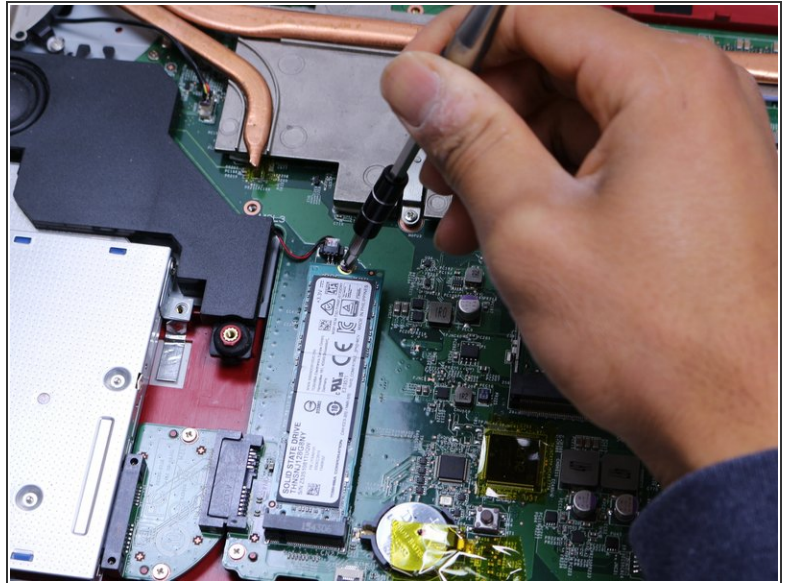
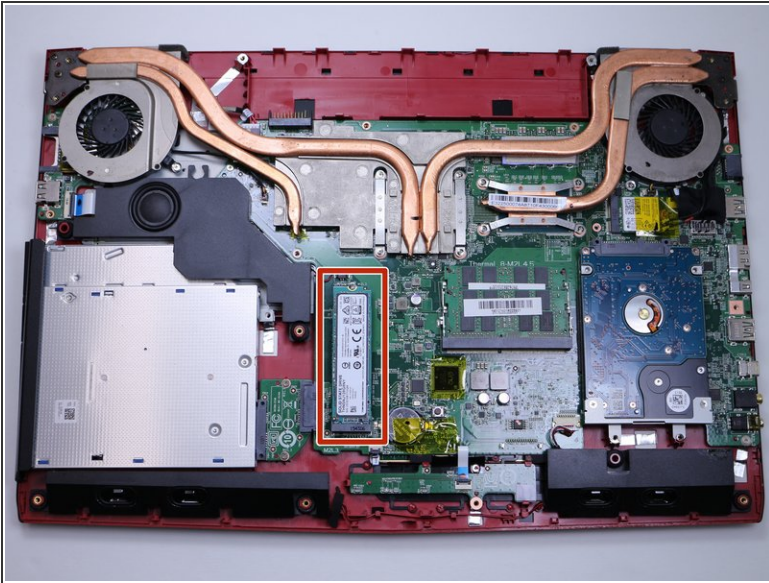
- ⚠ Don't press on the hinges too hard.
- ⚠ Be careful about the angle at which you're sliding out the chip.

Step 15



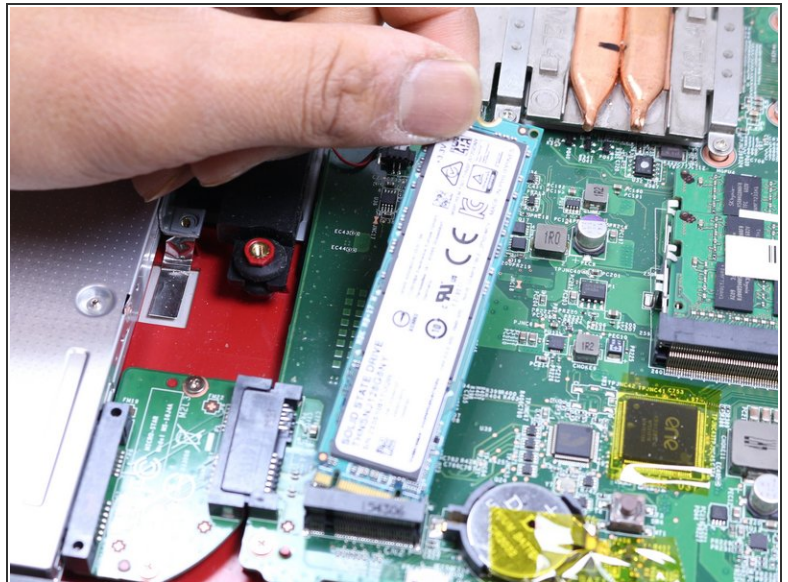
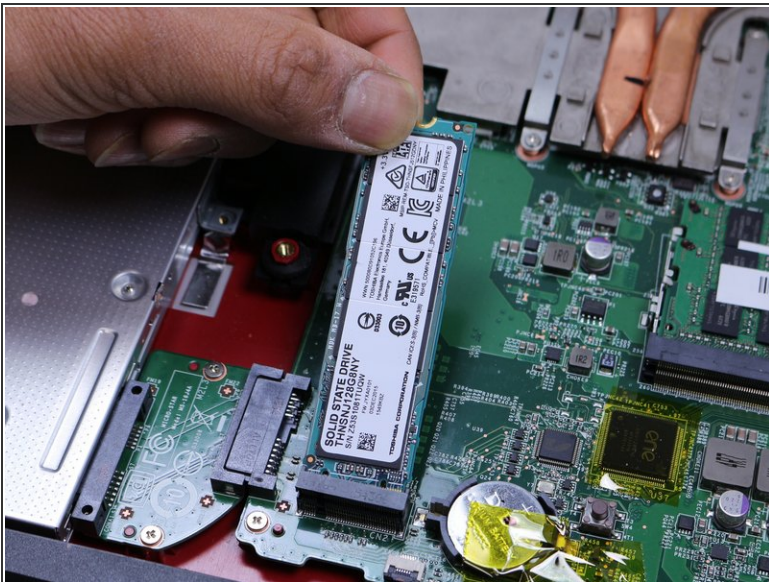
- Similarly, press on the hinges on the sides of the other RAM chip, in order to unlock it.
- ⓘ Some laptop models might not come with two RAM chips, so if that is your case, you can skip this step.

Step 16 — SSD



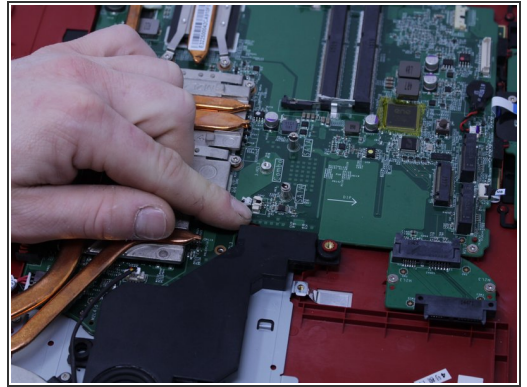
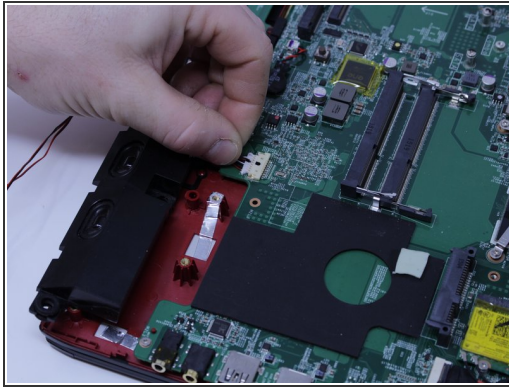
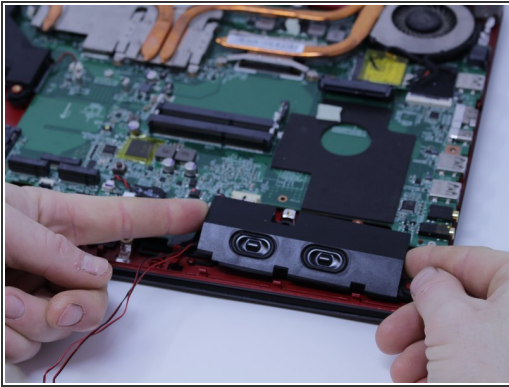
- Remove the single 5.5mm Phillips #1 screw attaching the SSD to the laptop.

Step 17



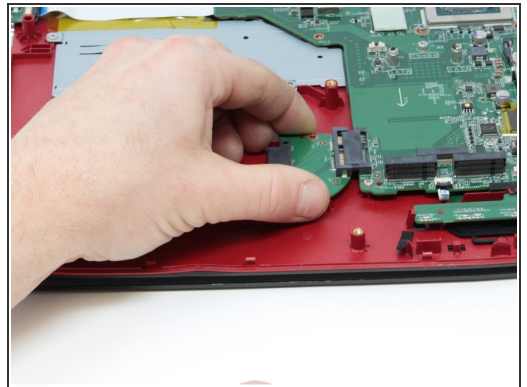
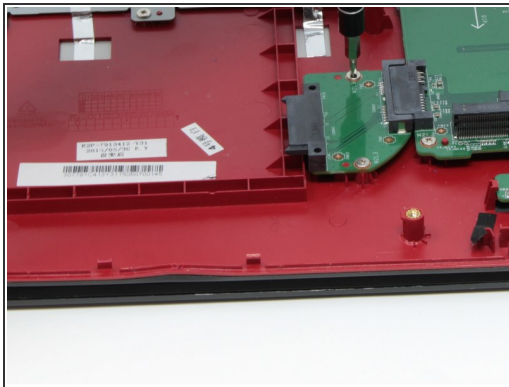
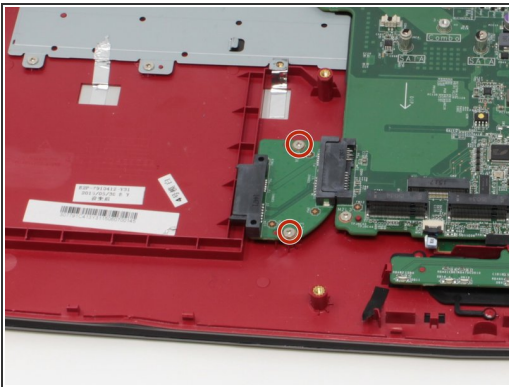
- Pull out the SSD by gently wiggling it from side to side until it comes out.
- ⓘ If the old SSD you removed contains the operating system, then the new SSD must also contain an operating system.

Step 18 — Motherboard



- Pull upward to lift the front speakers and sub-woofer out of place.
- Carefully slide out the connectors for both of the speaker systems.

Step 19



- Use the Phillips #0 Screwdriver to remove the two 4mm screws that are holding the SATA connector in place.

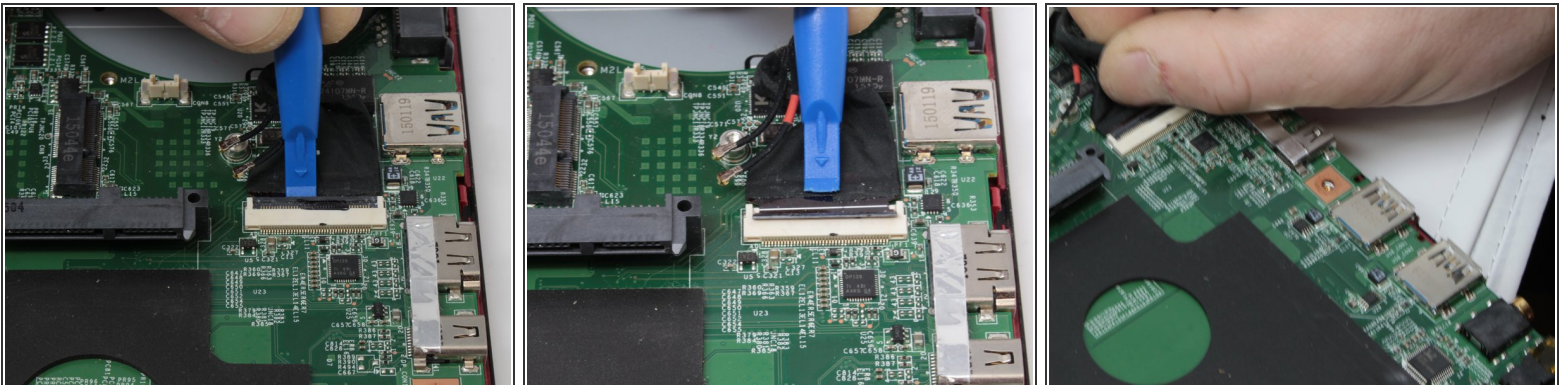
Step 20



- Remove the WIFI card by disconnecting the two coax cables and removing the retaining screw.

⚠ Try to preserve the tape that covers the WIFI card so it can be reappplied.

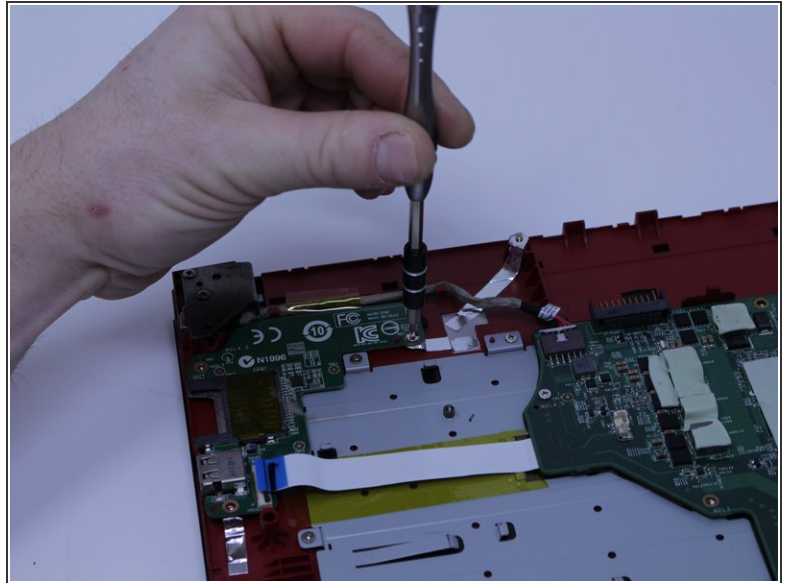
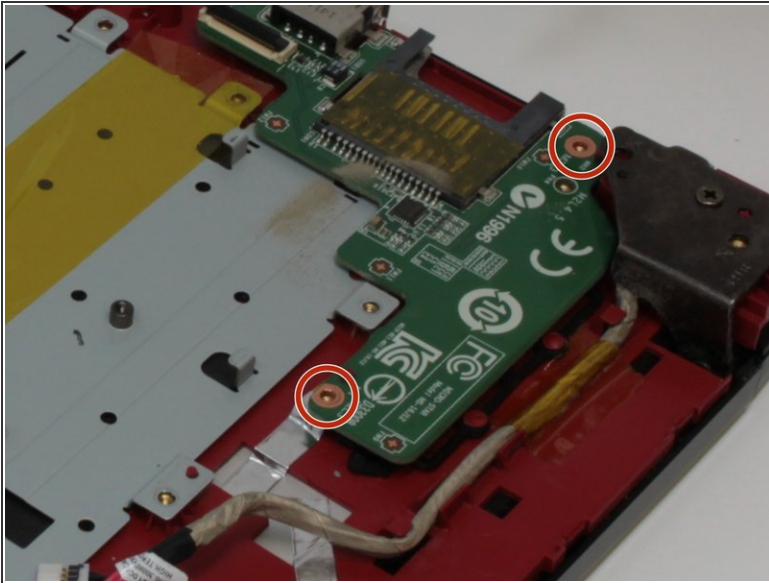
Step 21



- Use the plastic opening tool to pry up the connector that holds the display cable so it can be disconnected.

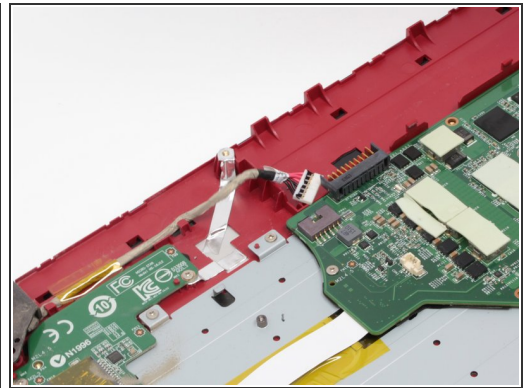
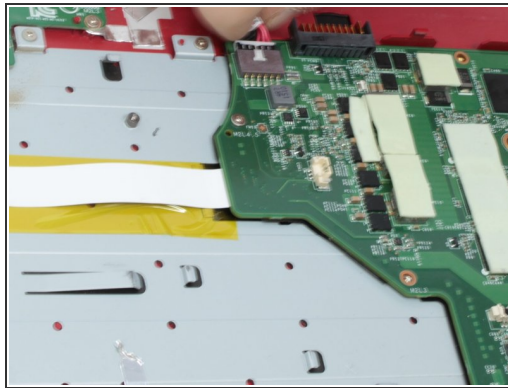
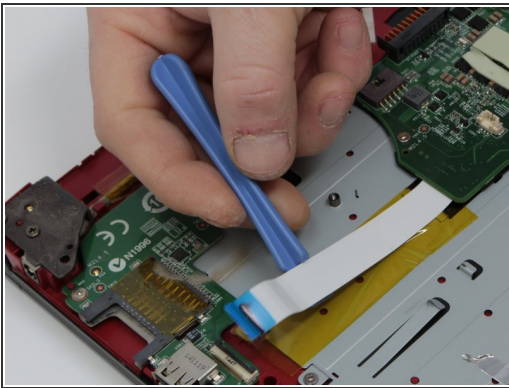
⚠ The connector for the display cable flips upward, but be careful because it is fragile enough to break.

Step 22



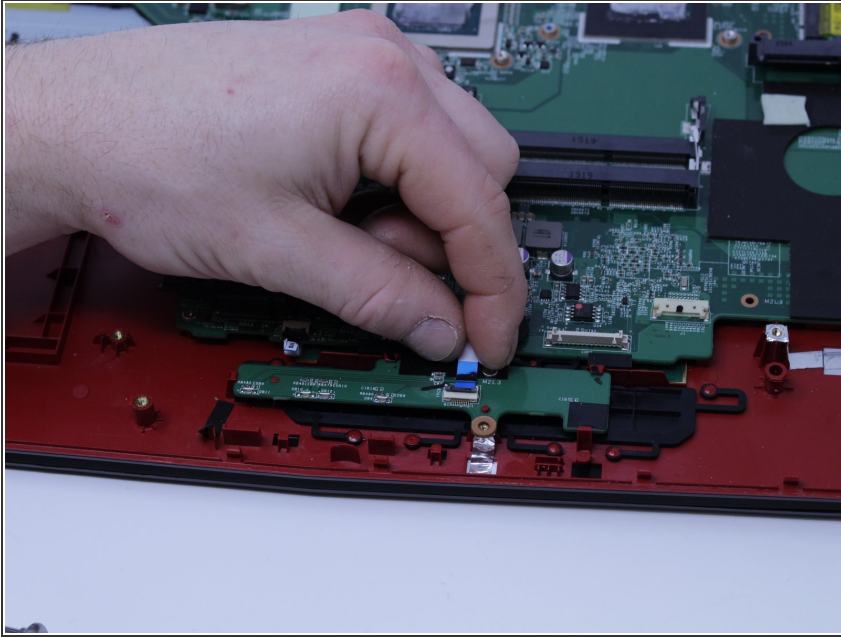
- Remove the SD card reader by unscrewing the two 3 mm screws that hold it in place.

Step 23



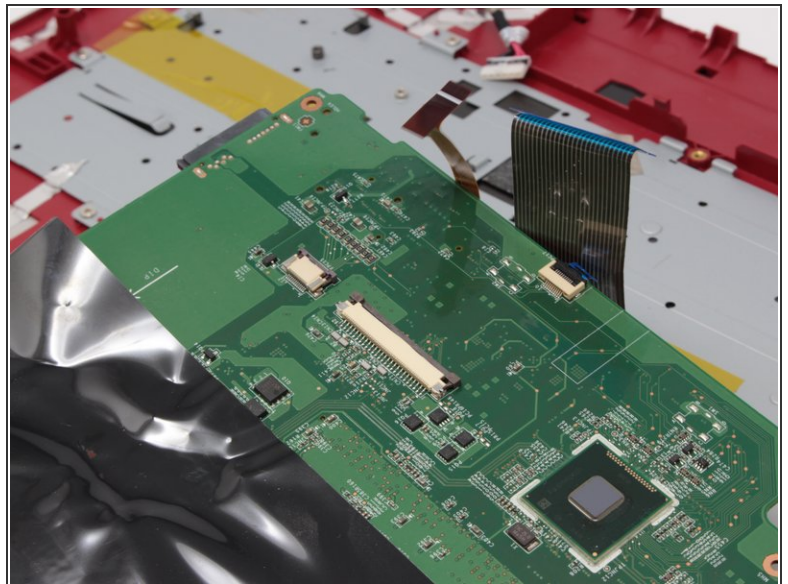
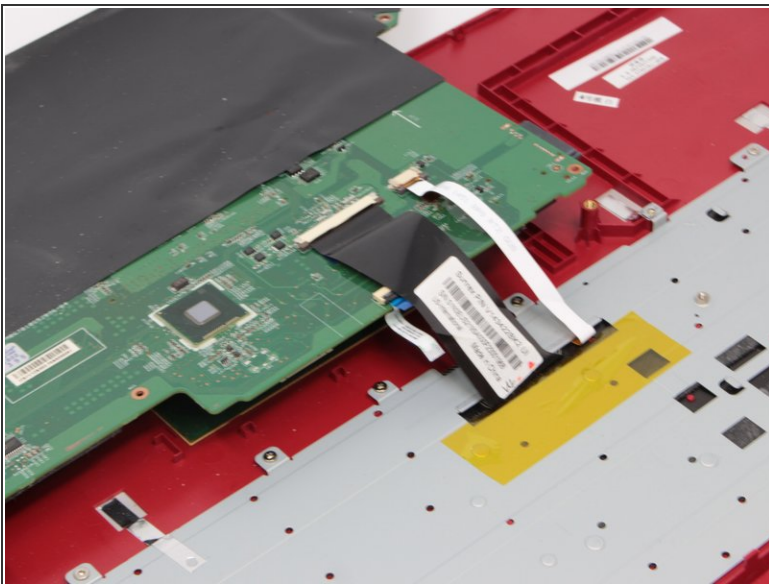
- Remove the power and USB connectors that are connected to the left side of the motherboard by pulling them from the motherboard and SD card reader respectively.
- ⓘ The power connector pulls out without the chance of breaking, but the USB connector is another fragile flip-up style connector.

Step 24



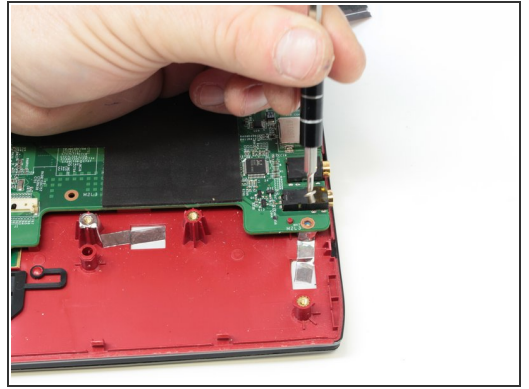
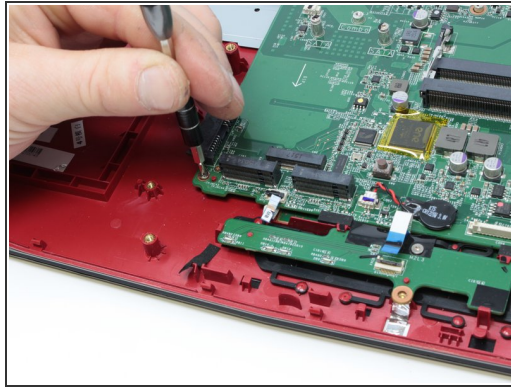
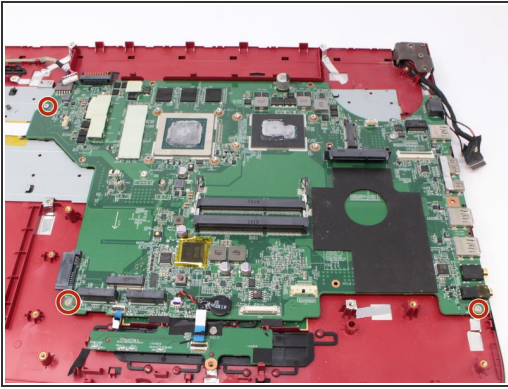
- Disconnect the motherboard from the mouse key control board by pulling the connector out.

Step 25



- Disconnect the keyboard from the motherboard by carefully sliding the connectors out of the connections on the motherboard

Step 26



- Use the Phillips #0 screwdriver to remove the three 3.8 mm standoff screws that retain the motherboard and carefully remove it.

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