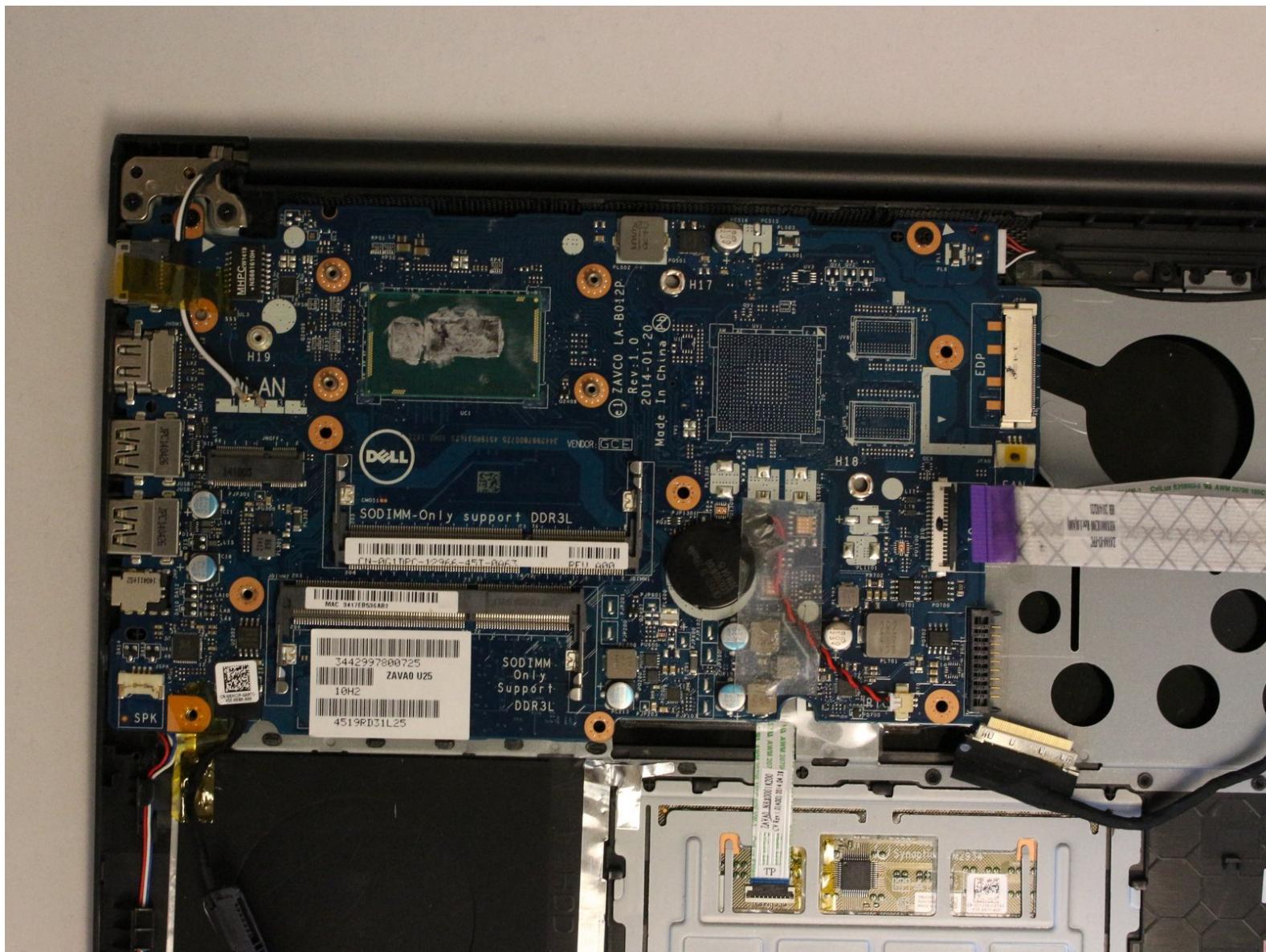




Dell Inspiron 14-5447 Motherboard Replacement

This guide will cover the steps needed to replace a faulty motherboard for a Dell Inspiron 14-5447

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INTRODUCTION

A damaged motherboard can cause severe issues with a PC. The Inspiron 14-5447's motherboard is hidden behind several components and a plastic barrier. This guide will show how to remove the remaining components and the barrier, as well as the motherboard itself.

Before beginning this guide, make sure that your computer is OFF, and that the components in the prerequisite replacement guides are removed. The tools needed to remove the motherboard are a Philips head screwdriver, tweezers, and a spudger (or any small prying tool).

TOOLS:

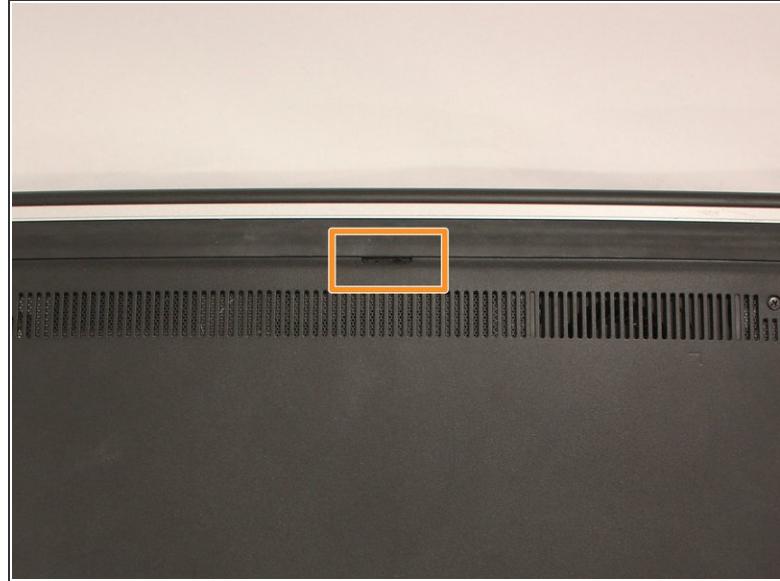
- [Phillips #0 Screwdriver](#) (1)
- [Tweezers](#) (1)
- [Spudger](#) (1)

Step 1 — Battery



- Flip the laptop upside down to access the battery.

Step 2



- Remove the two black 5.70mm Phillips#0 screws on the case's back.
- Locate the small slit, centered between the removed screws, which will help open and remove the back cover.
- Insert a plastic opening tool into the small slit and pry up the back cover.

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Step 3



- Locate the battery. It is a large black plastic object that has a grey square with the words "DELL" on it.

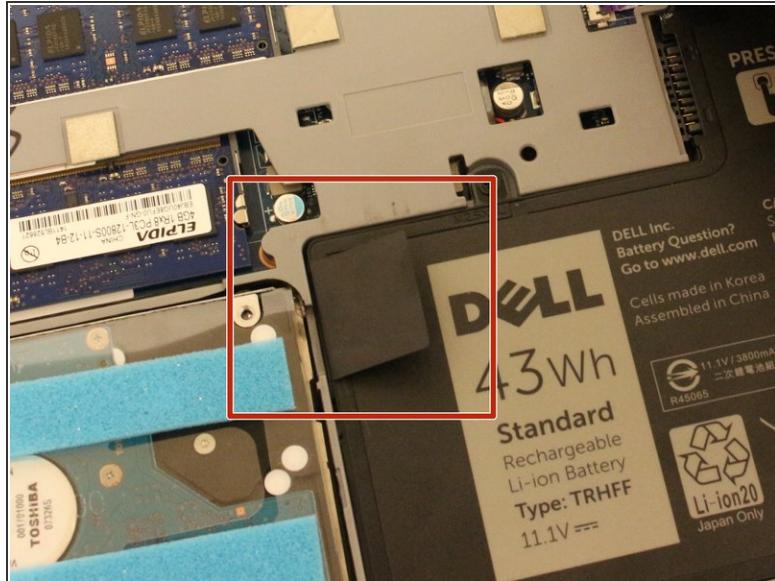
 Treat the battery with care - puncturing or bending may cause damage to the battery and may result as a fire or injury.

Step 4



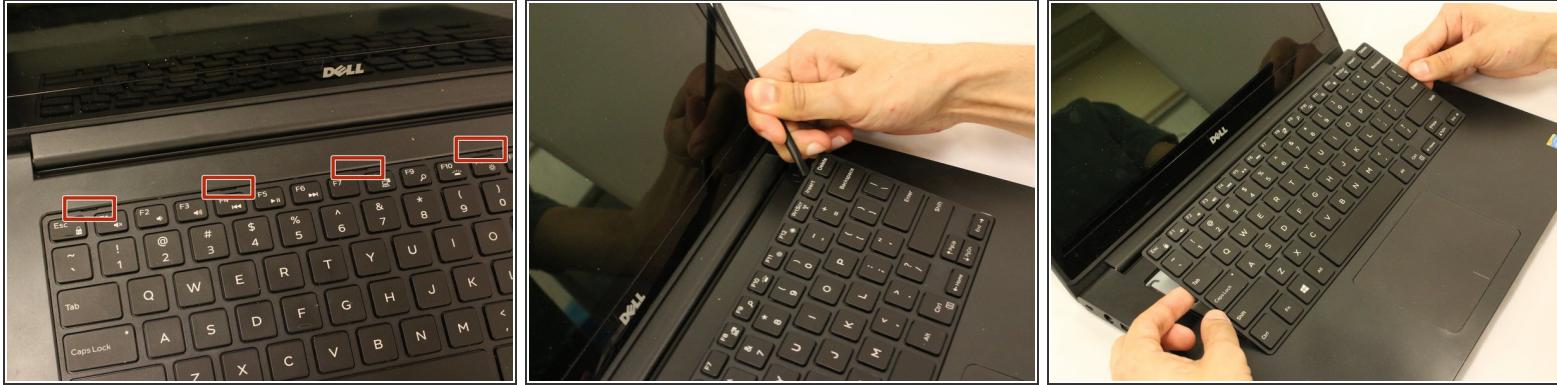
- Remove the two 5.70mm Phillips #0 screws on the left side that secure the battery in place.

Step 5



- Use the black plastic flap on the left side to pull the battery out.
- Slowly lift the flap up with the battery and it should slide out smoothly.

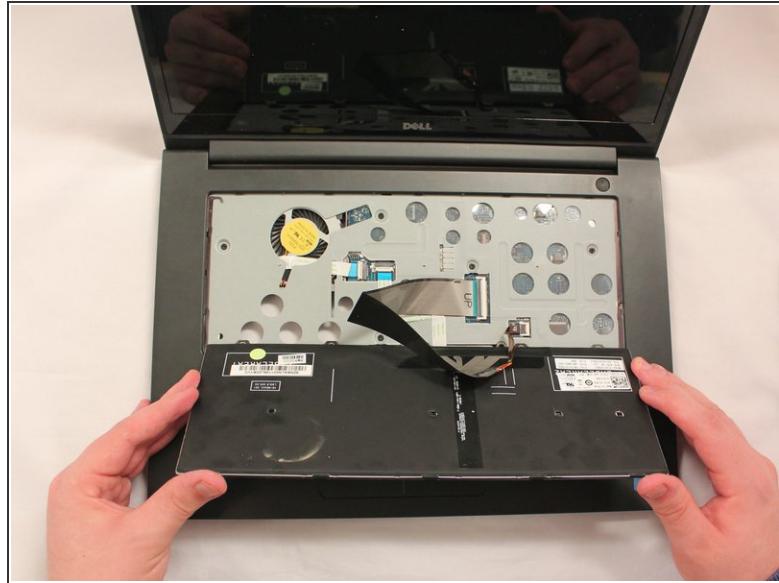
Step 6 — Keyboard



- Carefully use a plastic opening tool to remove the keyboard.
- There are five small slits at the top of the keyboard made for its removal.
- Once you have gently pried each slit, slide the keyboard towards the screen at an angle for removal.

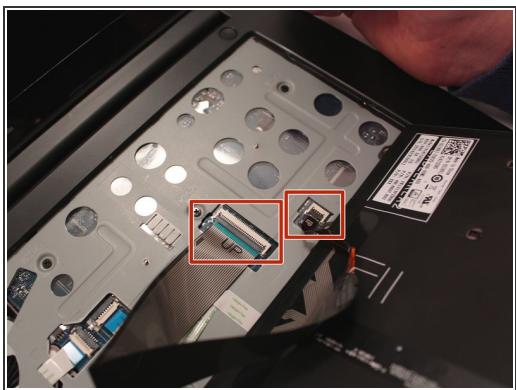
⚠ Be cautious when lifting the keyboard as there are secured fragile wires connected underneath it.

Step 7



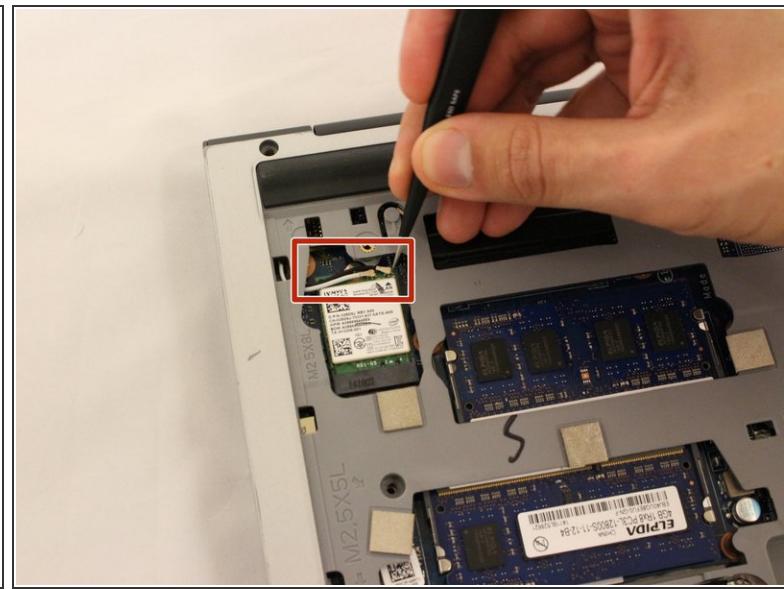
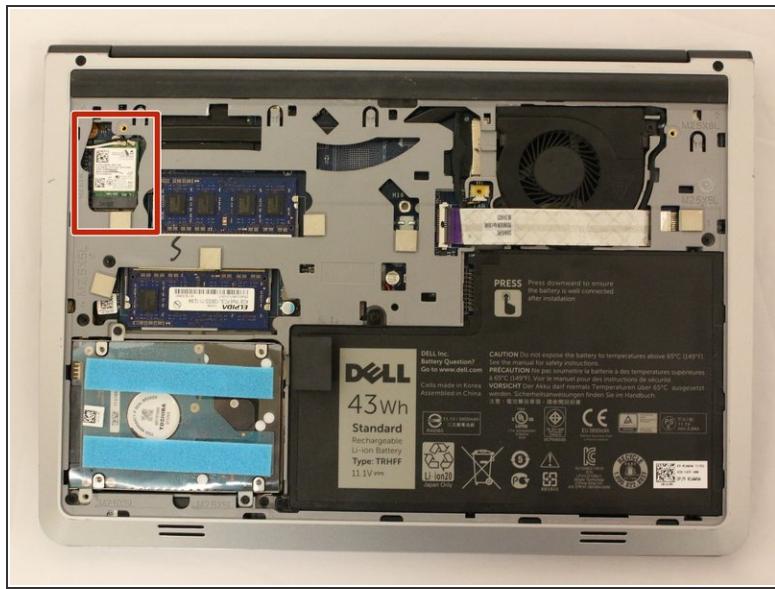
- (i)* If the keyboard is not lifted with caution, damage to the cables may occur.
- Gently lift the keyboard and flip it carefully to the mouse-pad.

Step 8



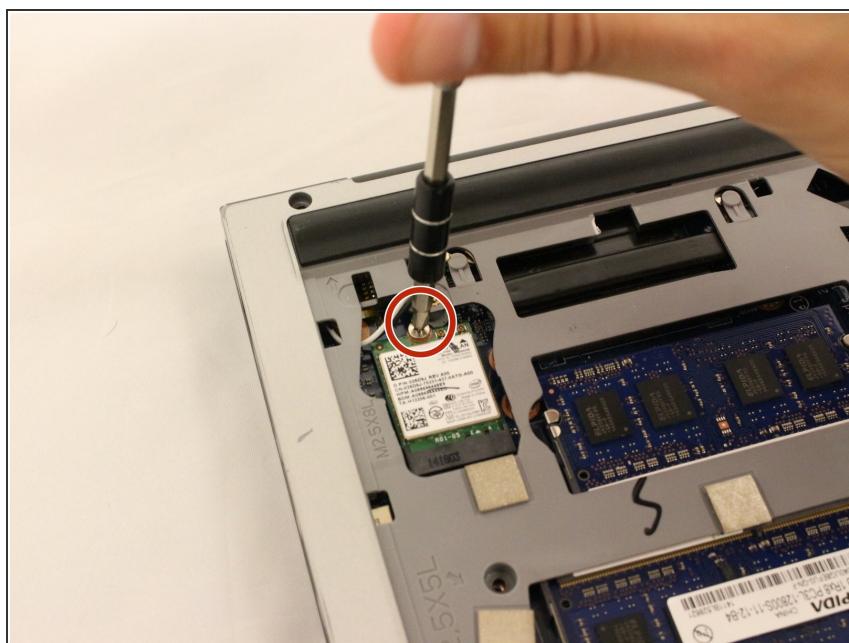
- Locate the two cable connectors. These are connected to the keyboard and the other side is attached to the laptop with a securing flap.
- To release the cables, take each flap and flip them upwards (unlocking position).
- Pull both the cables out after unlocking. The keyboard can now be set aside.

Step 9 — Wifi Card



- Locate the WiFi card on the top left of the laptop.
- Use the tweezers to release the black and white cables.

Step 10



- Remove one silver 2.9mm Phillips #1 screw which secures the WiFi card.

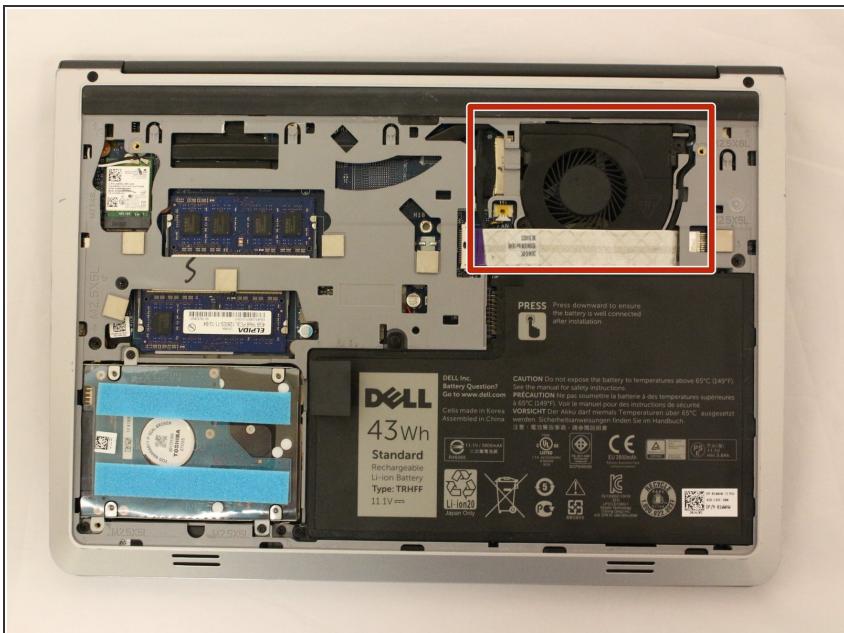
Step 11



(i) The Wi-Fi card should slide out of the black socket.

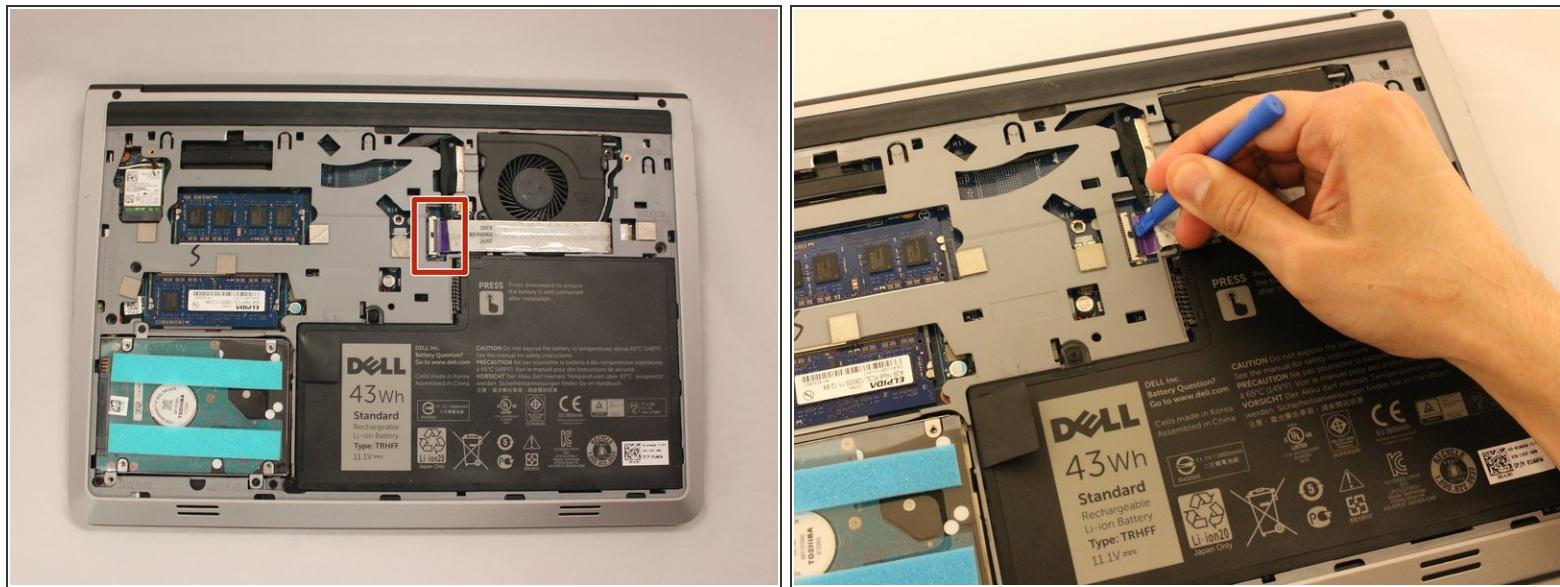
- Use tweezers to push the white part of the Wi-Fi card up towards the top of the device to remove.
- Remove the card with the tweezers.

Step 12 — Fan



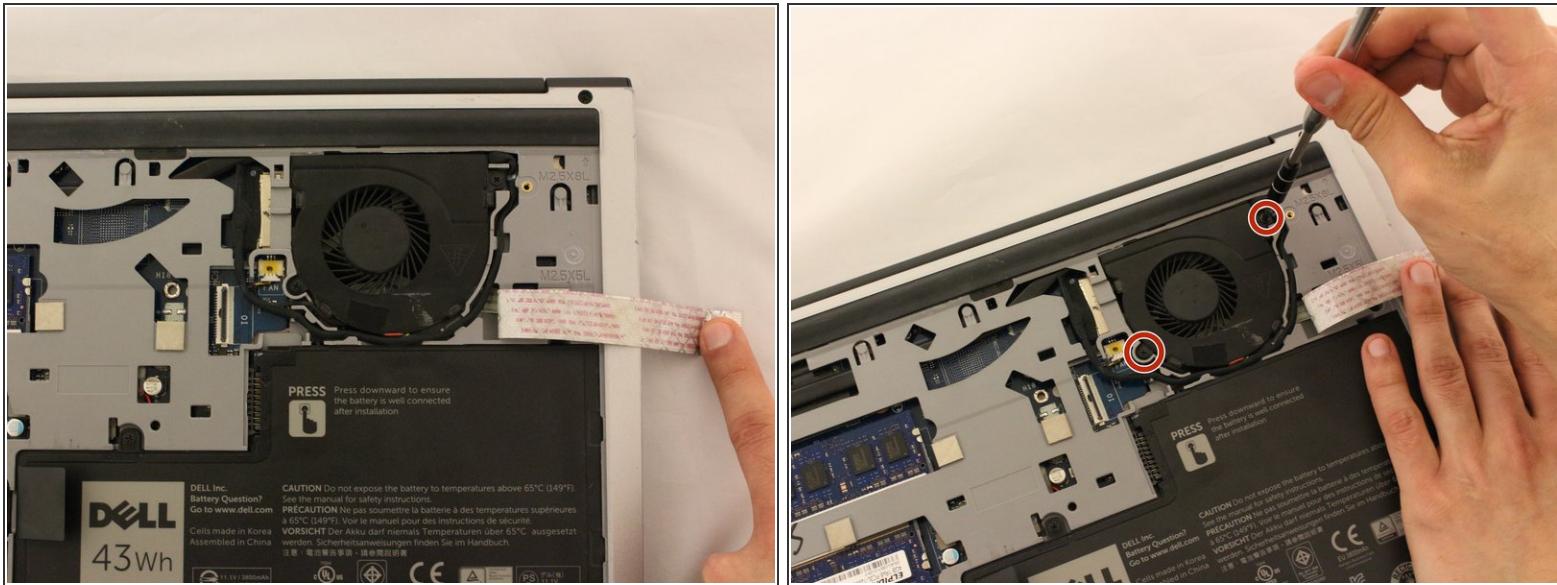
- Locate the fan system in the top right corner.

Step 13



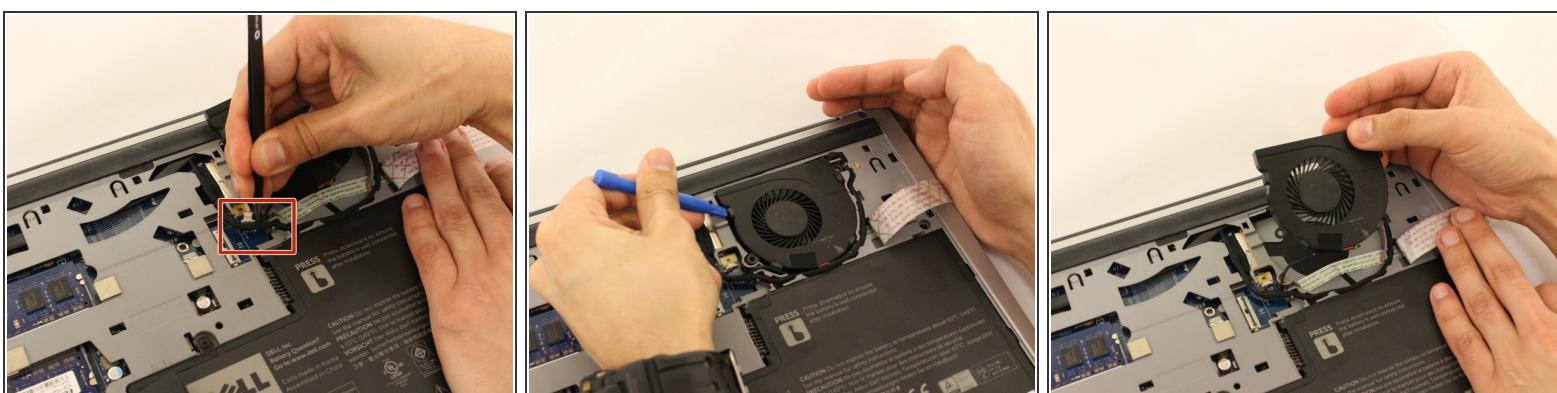
- Locate the wide white cable line until to see the securing flap insert.
- Remove the thick white cable crossing over the fan by using the spudger to flip the securing flap holding down the cable.

Step 14



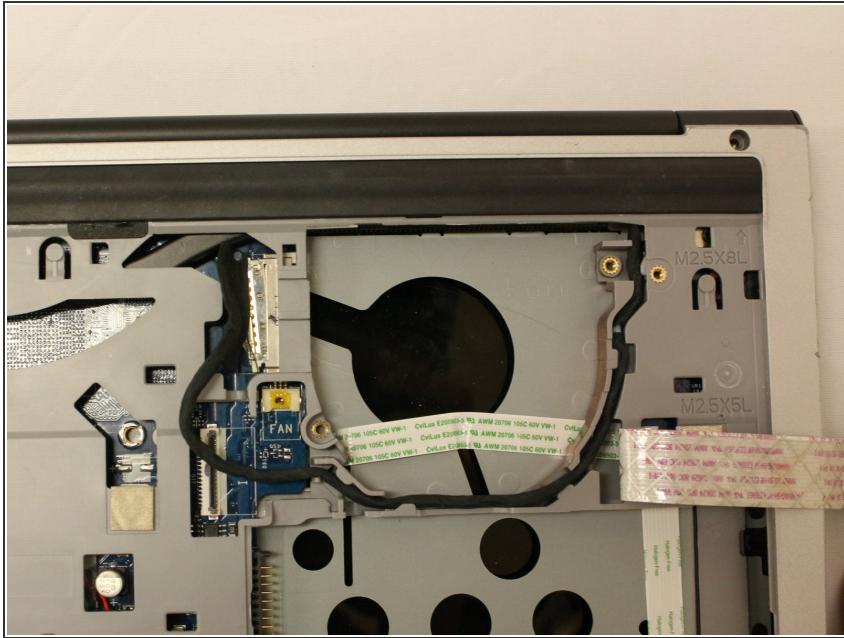
- Move the cable over to the side to reveal the fan screws.
- Locate and remove the two black (5.70mm) screws from the fan.

Step 15



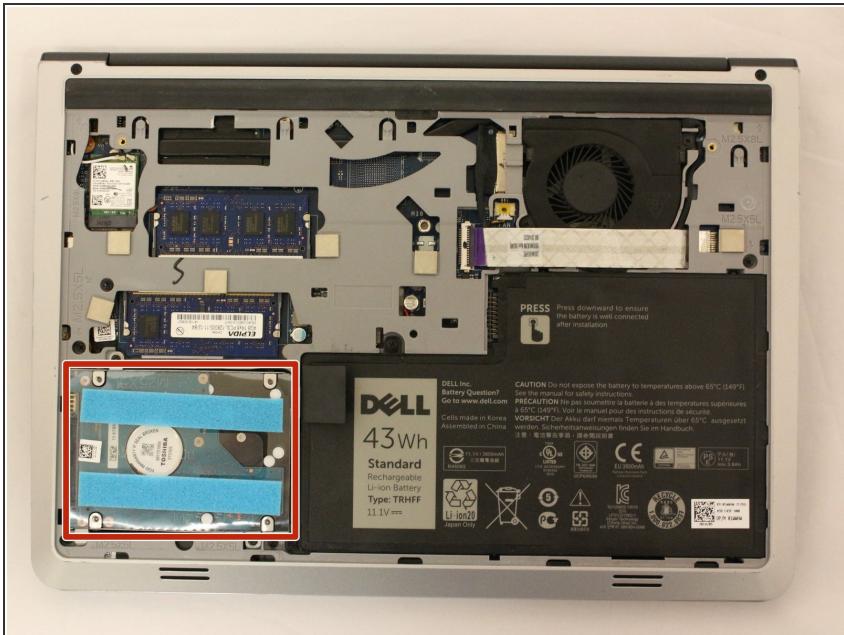
- Use tweezers to remove the small cable attached to the fan.
- Using the blue spudger, pry the fan out of its place.
- Remove the fan slowly to prevent damage to any wires or cables connected to the device.

Step 16



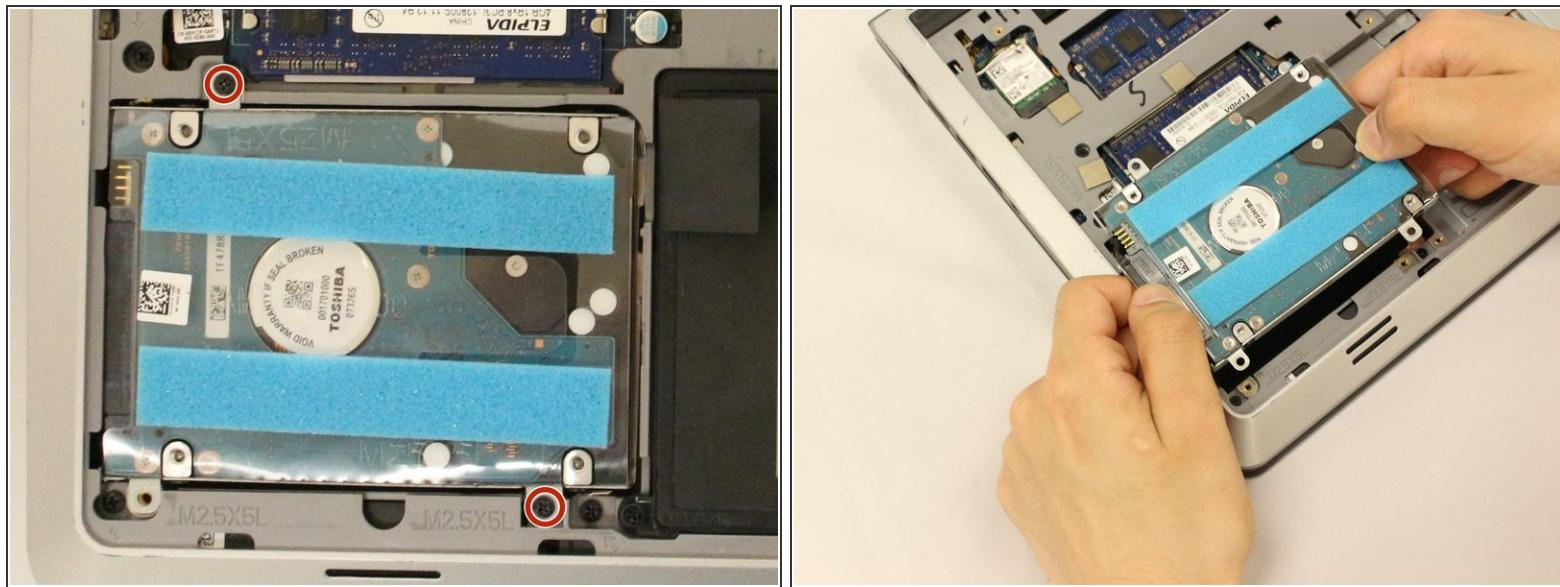
- Carefully remove the fan. Once the fan is removed, cleaning may be necessary to prevent overheating.

Step 17 — Motherboard



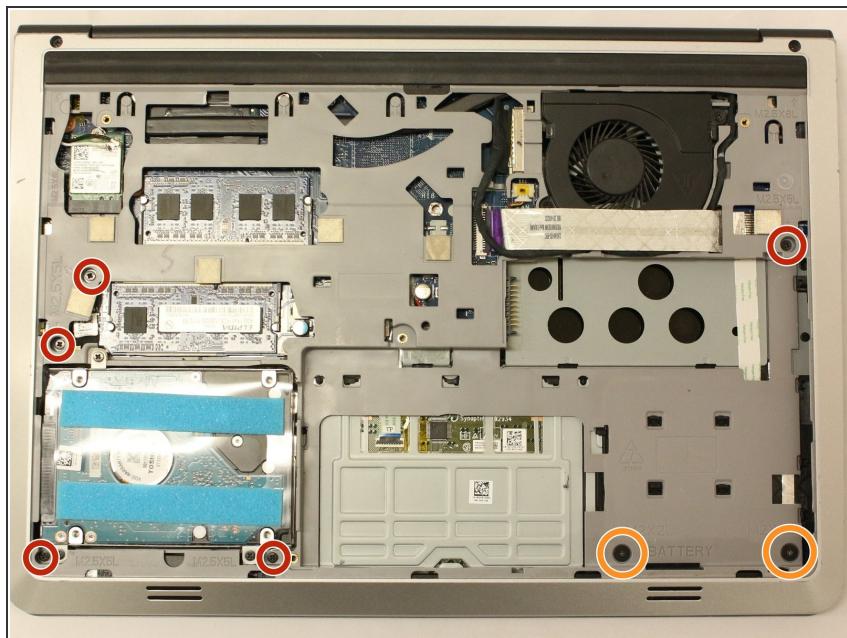
- Locate the Toshiba hard drive.

Step 18



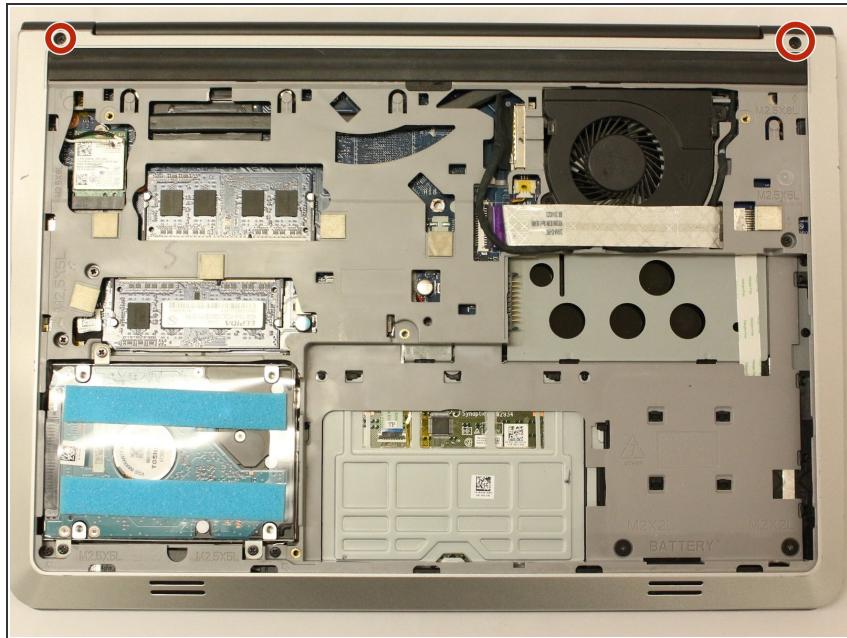
- Locate and unscrew the black (5.70mm) screws on the top left and bottom right of the Hard drive.
- Lift up the hard drive from the right side with caution as wires are connected to this unit.
- Holding the right side the hard drive and and with the other hand on the black connector (left side). Pull apart from each other carefully.

Step 19



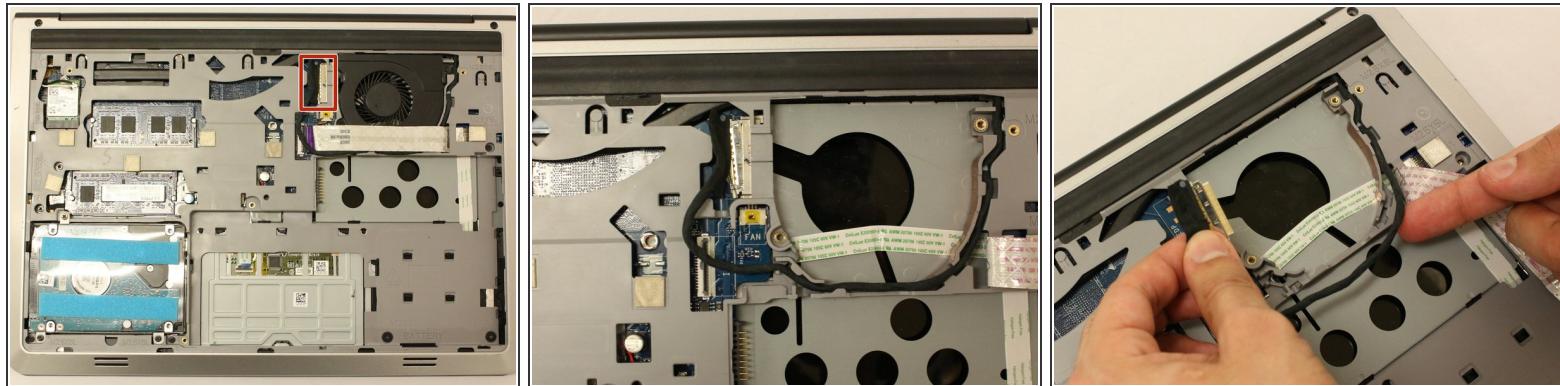
- Unscrew the five (5.70 mm) screws in the gray plating
- Unscrew the two black (2.50mm) screws underneath the area where the battery would be.

Step 20



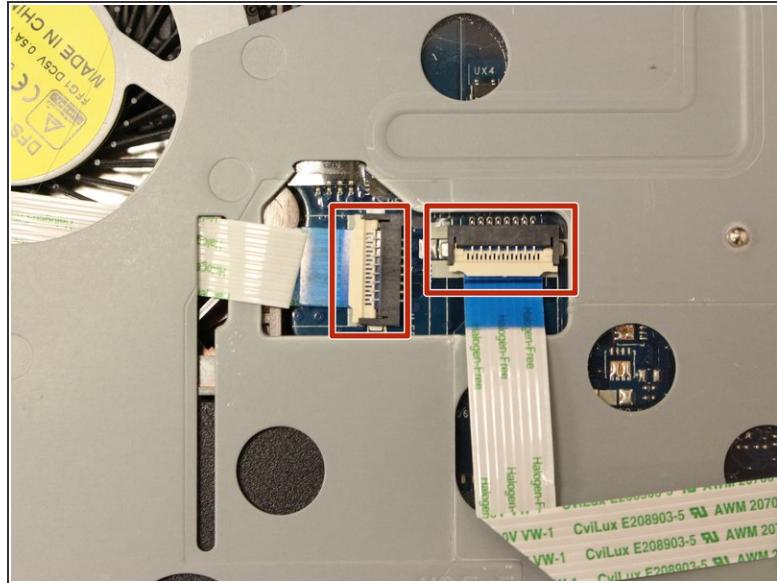
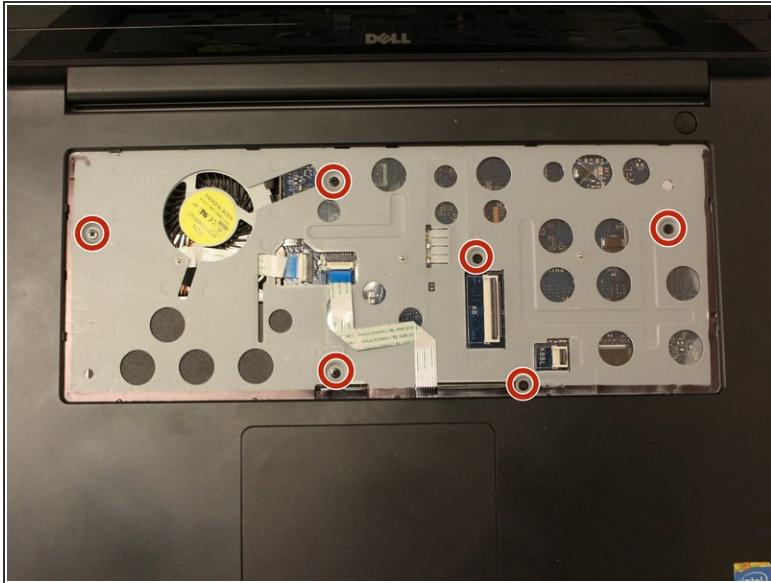
- Locate the two black (8.70mm) screws at the laptop's hinges and unscrew.

Step 21



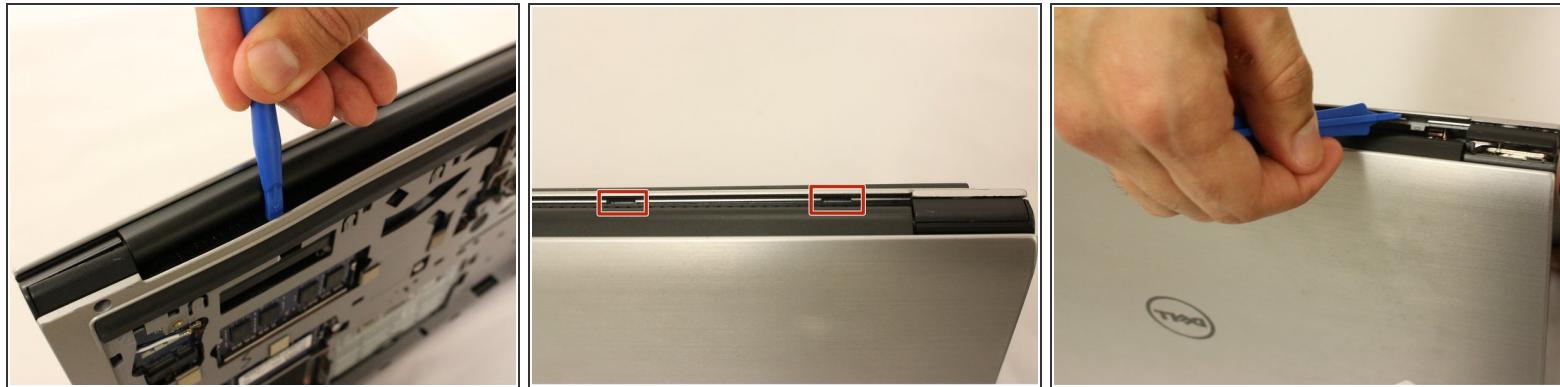
- Locate the black plug connector next to the fan.
- Using tweezers, gently pull the metallic part of the plug from its input.
- Remove and loosen the wire from the gray plating.

Step 22



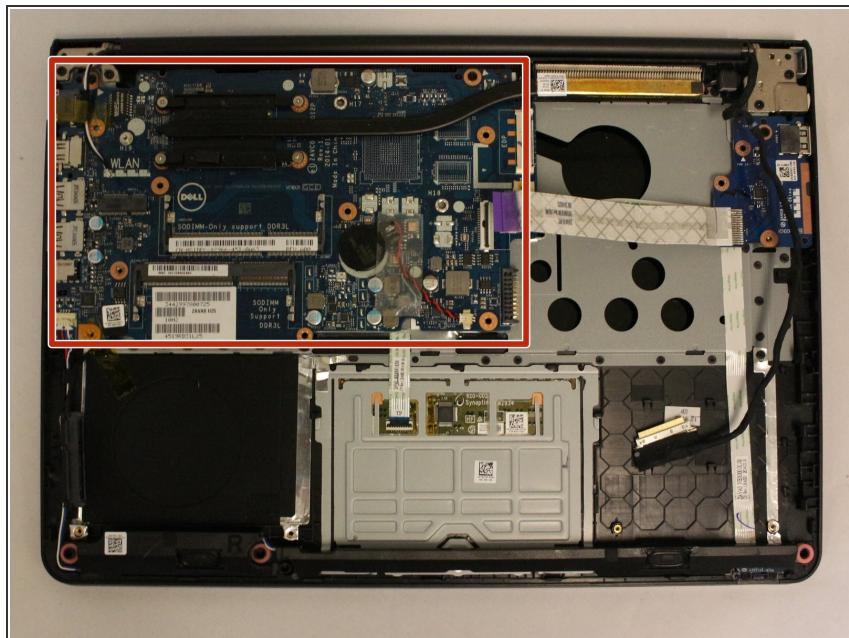
- Flip the laptop back over and open it.
- Unscrew the six black (5.70 mm) screws from under the keyboard.
- Locate the ends of the white cables and flip the white securing flaps upwards.
- Remove the cables from inside the connectors.

Step 23



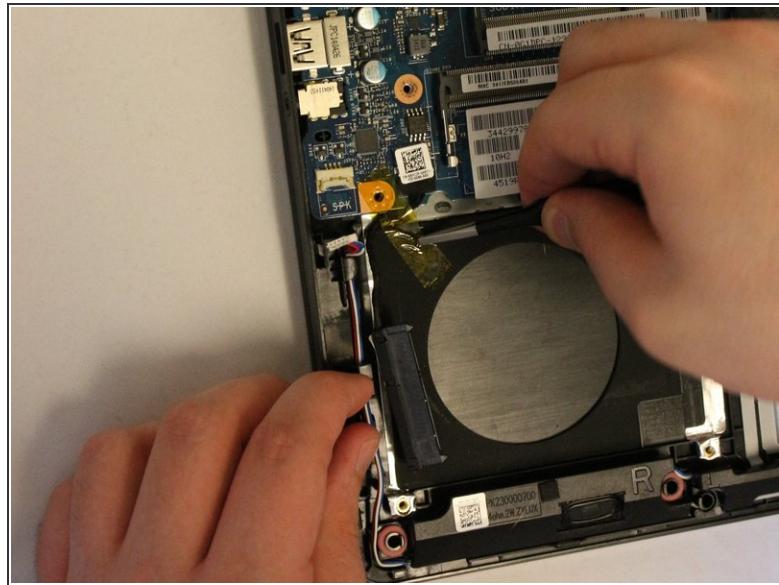
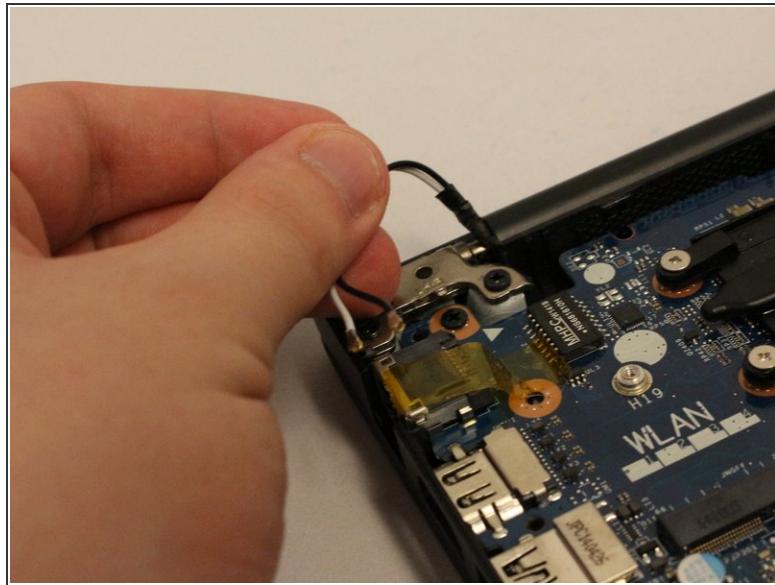
- Using the blue spudger pry the gray plastic plating off. Be mindful of the openings along the top side between the hinges.
- The gray plating cover is secured extremely tightly. Be careful not to break any parts of it as you pry. Note also that the black parts which serve to cover the hinges are also a part of this gray plating, and should come off with it.

Step 24



- Locate the motherboard.

Step 25



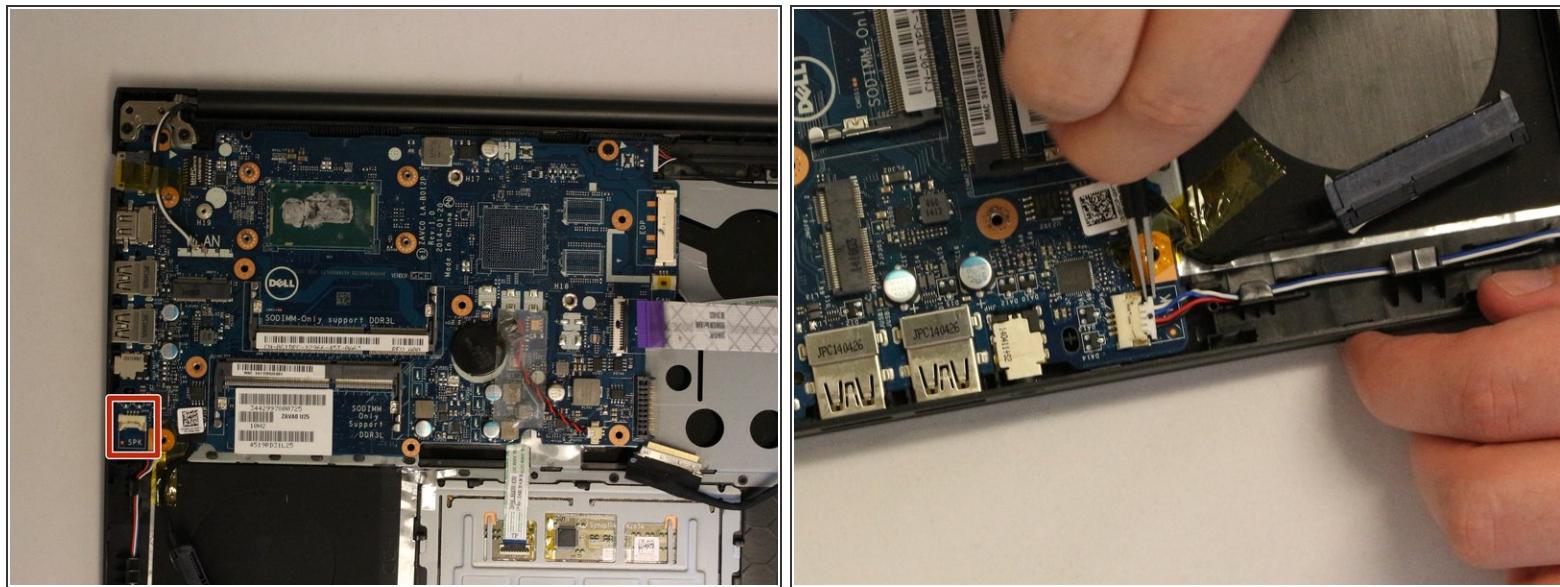
- Slip the Wi-Fi card wires (black and white pair) out from under the yellow translucent tape.
- Peel back the yellow translucent tape at the bottom of the motherboard which secured the hard drive connector.

Step 26



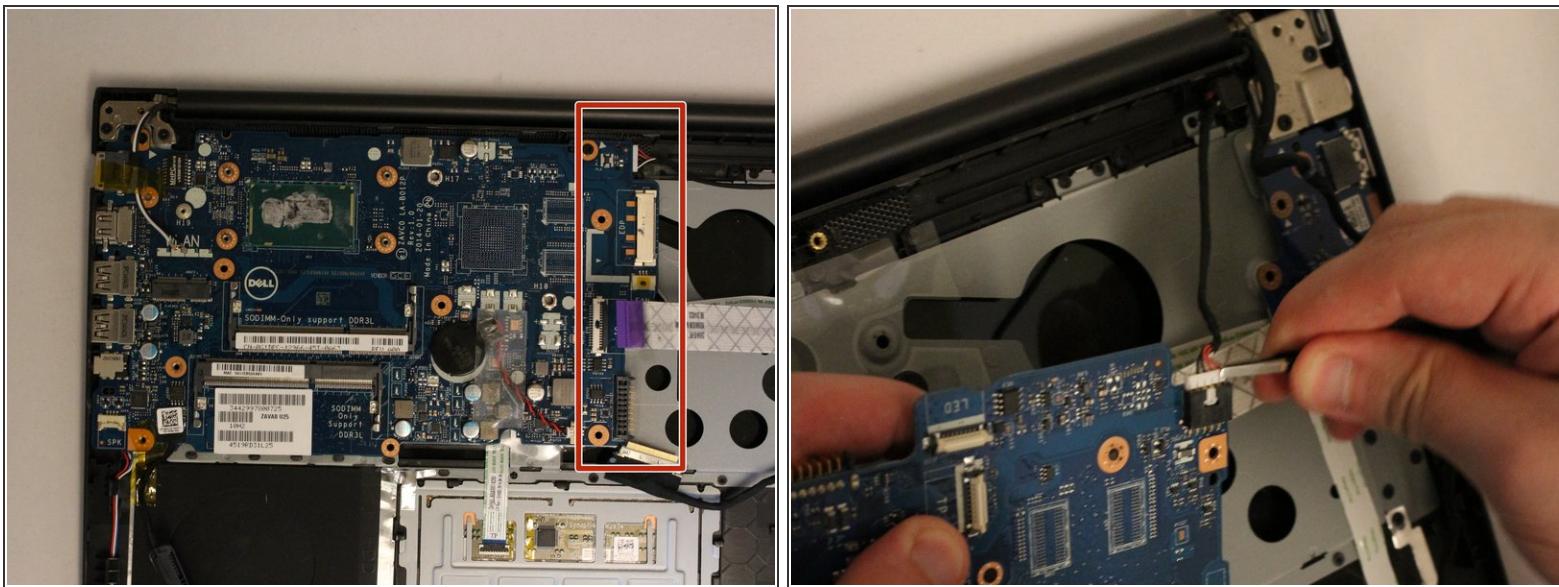
- Locate the heat-sink. This will be a black metal bar at the top of the laptop, which covers the motherboard.
- Unscrew the four metallic-colored (2.9mm) screws securing the heat-sink.
- Locate and unscrew the top two black (5.70mm) screws, which secure the motherboard to the base of the laptop.
- Lift the heatsink, and set aside.

Step 27



- Locate the small wire plug on the bottom left of the motherboard.
- Gently remove the wire plug with tweezers.

Step 28



- To remove, slowly lift upwards on the left side of the mother board and pull to the right. Wiggling it around may help loosen from the USB connectors on the left side.
 - Lift the motherboard up slowly, and flip it upside down. Remove the white wire plug on the underside of the motherboard.
- (i)** This plug is secured very tightly. The rectangular mark in the top is meant to be pushed down with a tool before it can actually be unplugged- you may need to lay the motherboard on a flat surface and call for assistance so that one person can focus on pushing down on the rectangular tightener, and one person can pull.

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