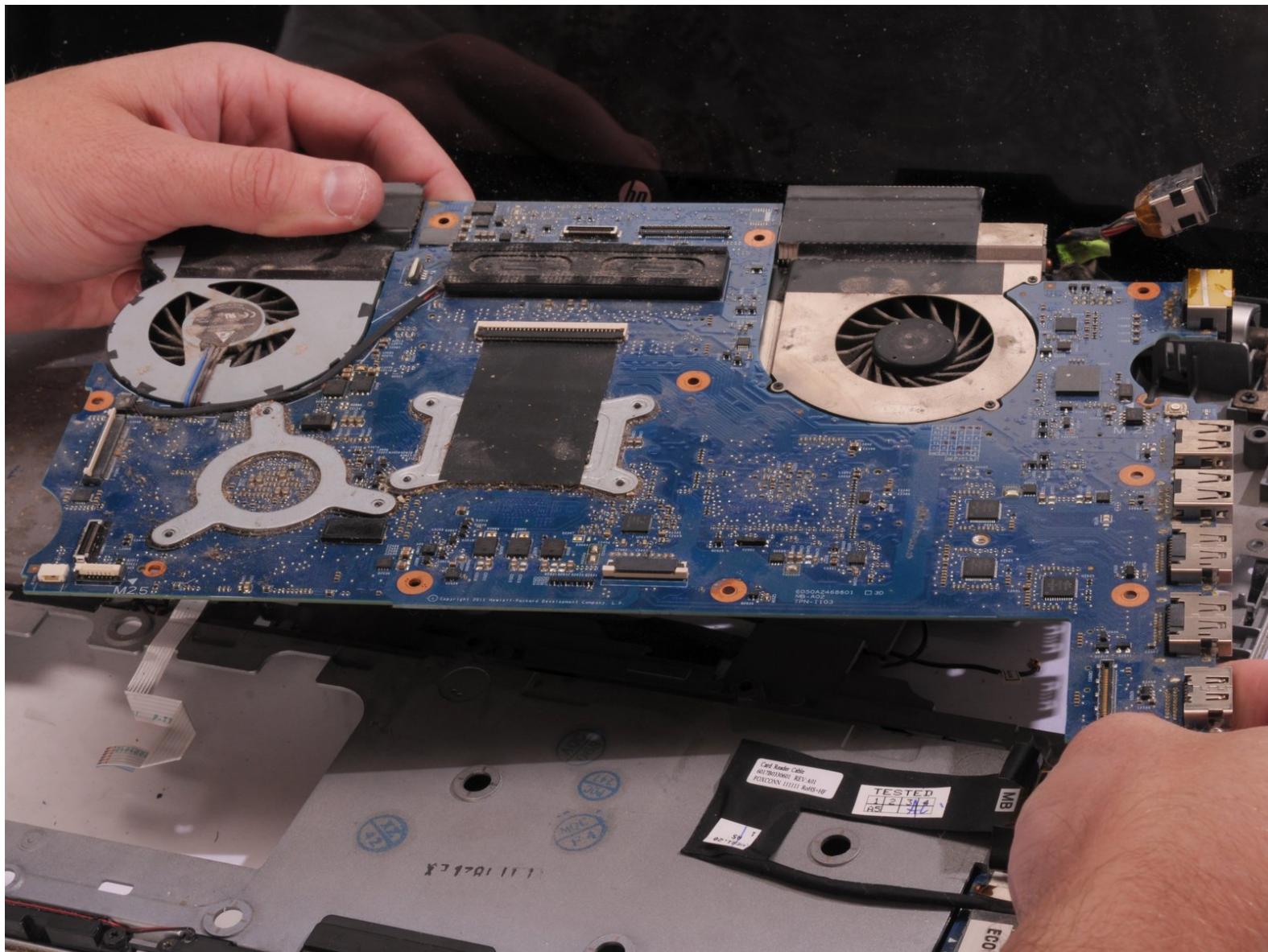




HP Envy 17-3070NR Motherboard Replacement

In this guide, we will show you how to replace the motherboard of your HP Envy 17-3070NR.

Written By: Jasper Lewin



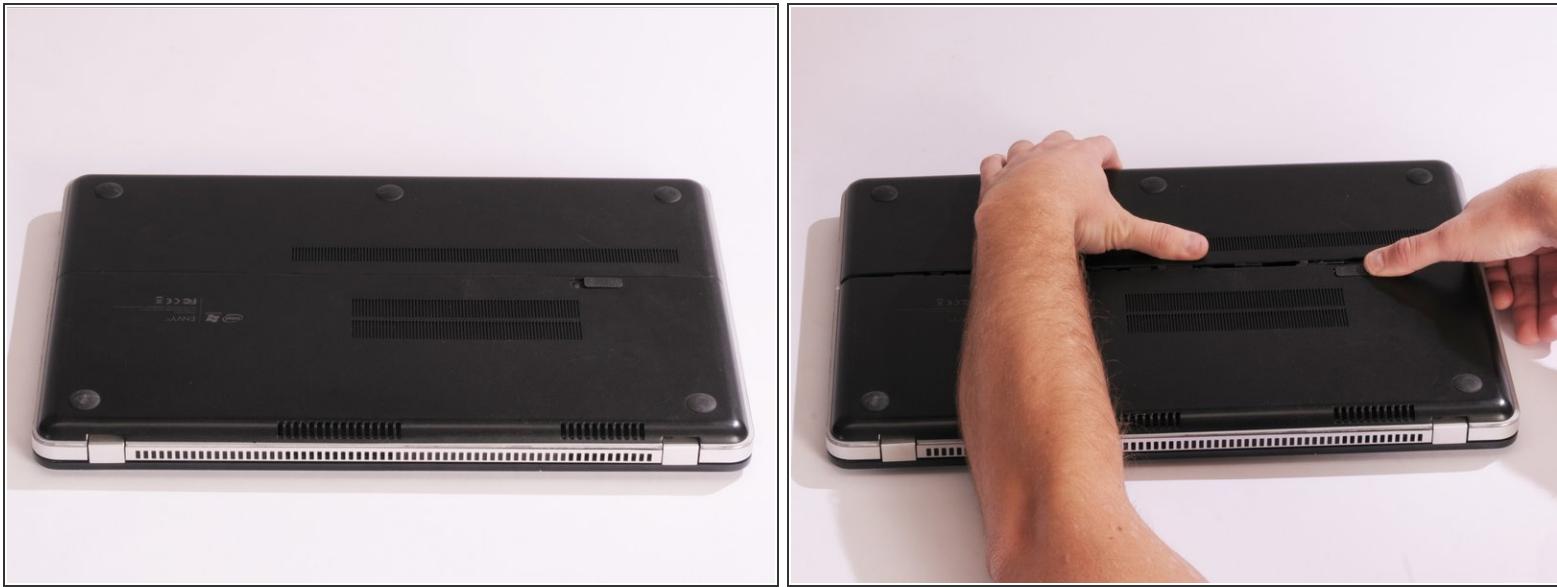
INTRODUCTION

Follow this guide if you want to replace the motherboard of your HP Envy 17-3070NR. The motherboard connects all parts of the PC together and it is a most complex part of the computer. Unfortunately, with great complexity comes great room for failure. Should any of the components on the motherboard fail, whole motherboard needs to be replaced to fix the issue.

TOOLS:

- [Spudger \(1\)](#)
- [T8 Torx Screwdriver \(1\)](#)
- [Arctic Silver Thermal Paste \(1\)](#)
- [Phillips #2 Screwdriver \(1\)](#)
- [Flathead Screwdriver \(1\)](#)

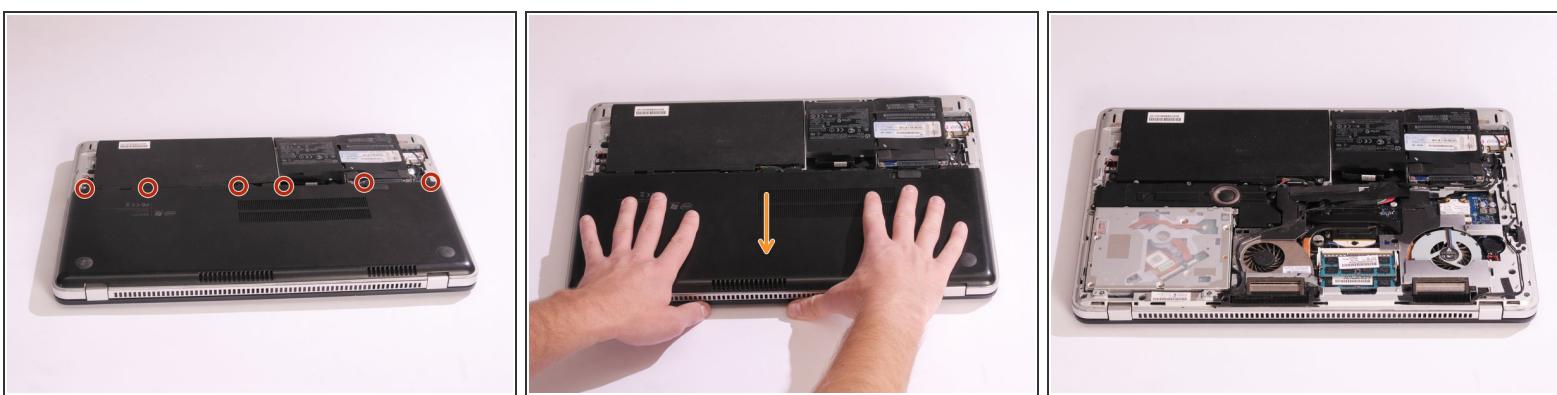
Step 1 — Back Cover



⚠ Before you begin taking apart the computer, make sure that it is completely powered off.

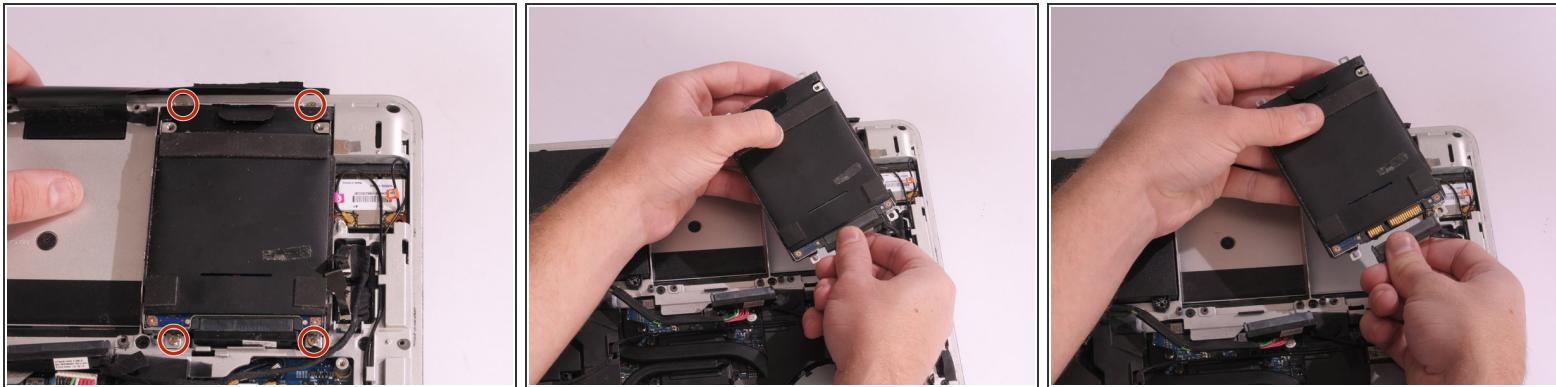
- Slide the release latch away from the nearest edge.
- Slide the back cover off of the computer.

Step 2



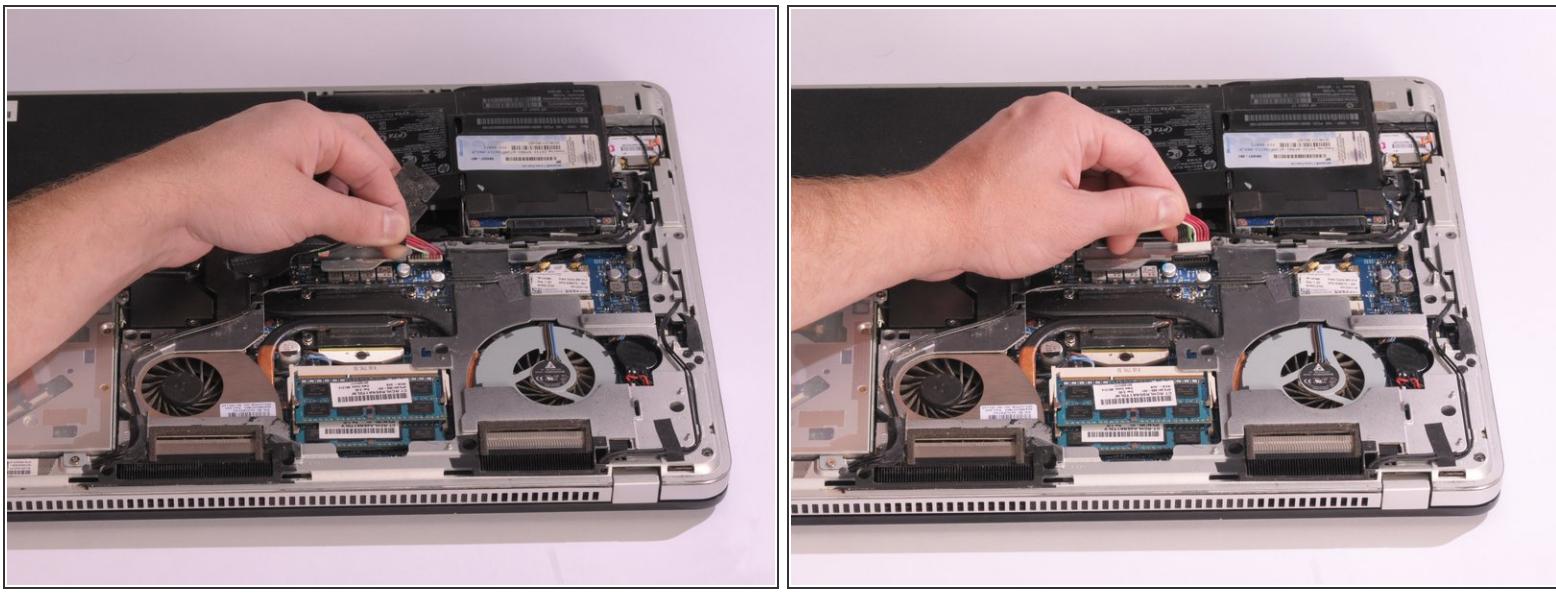
- Remove the six 3.7mm Phillips screws.
- Slide the back cover until it clicks, then lift it straight off.

Step 3 — Hard Drive



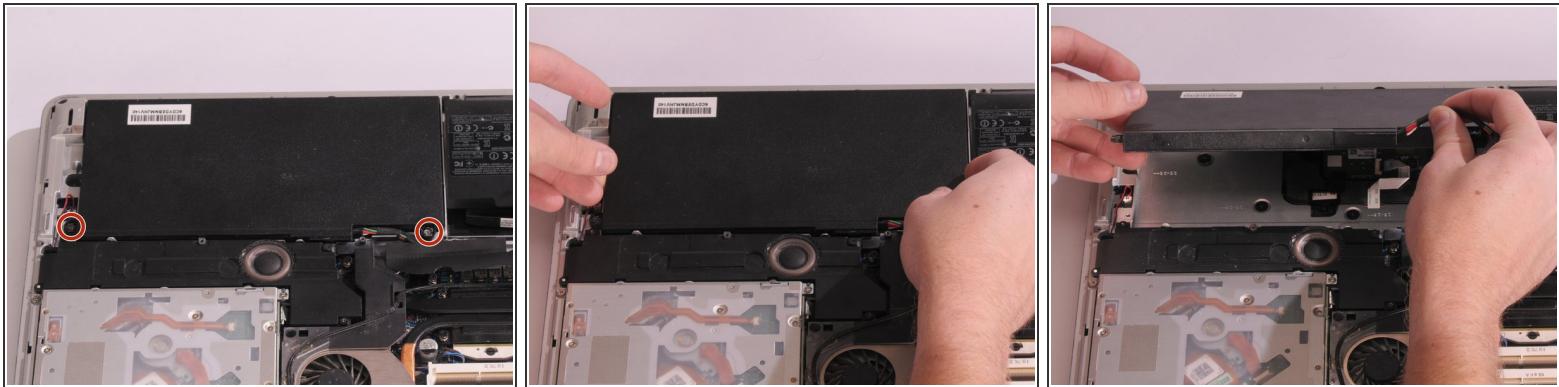
- Remove the four 3.7mm Phillips screws that hold the hard drive onto the computer.
- Remove the hard drive by lifting it out of its cavity.
- Unplug the hard drive cable that connects it to the main assembly.

Step 4 — Battery



- Disconnect the multi-colored battery cable from the main assembly by gently pulling upward on it.

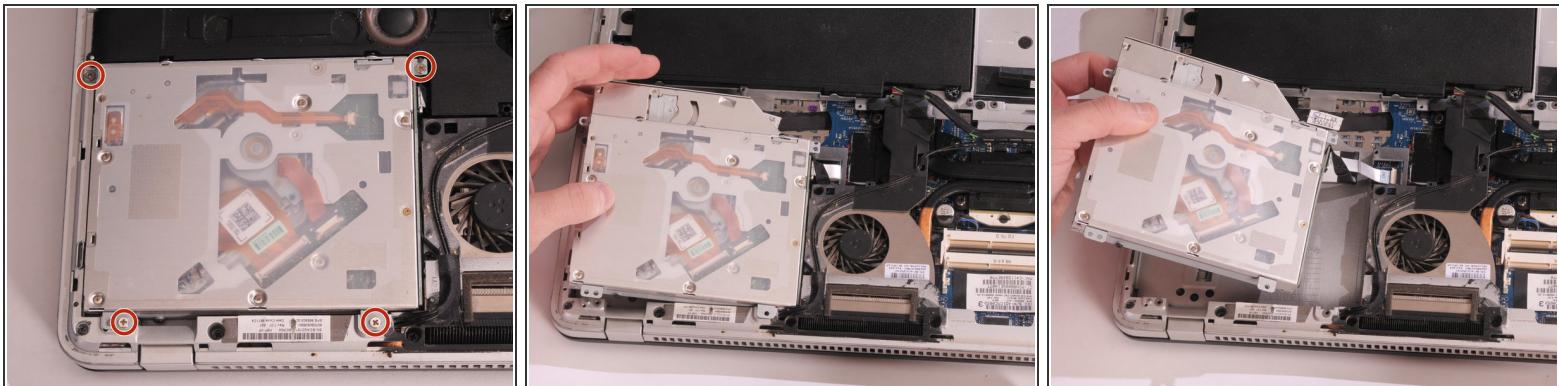
Step 5



- Remove the two 3.8 mm Torx screws using M8 Torx screwdriver.
- Remove the battery by pulling it straight out away from the computer.

(i) It is much easier to use the battery cable to carefully lift the battery off than to try to pry it off with tools.

Step 6 — Optical Drive



- Remove the four 3.7mm Phillips screws that secure the optical drive to the computer.
- Slowly lift the optical drive away from the computer ensuring that you don't put stress on the connecting cable.

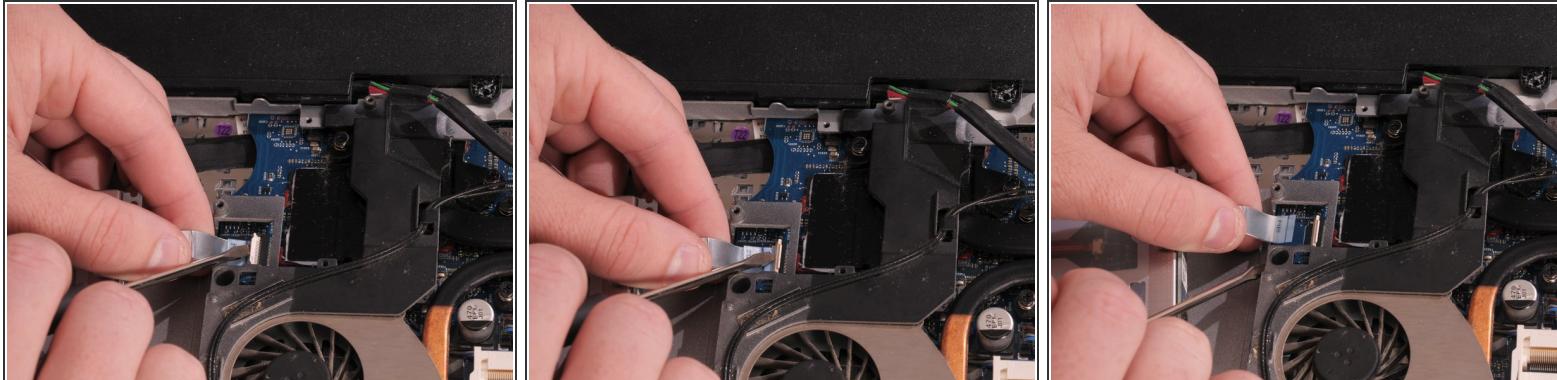
⚠ Do not fully lift off the optical drive as there is still a cable that connects it to the motherboard.

Step 7



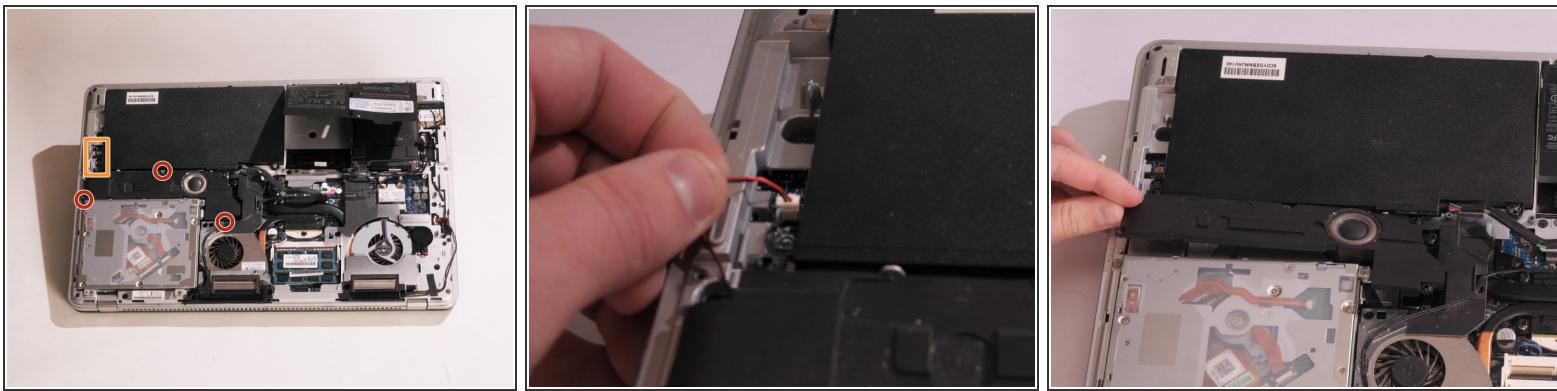
- Remove Sub Speaker assembly first in order to remove Optical drive. Carefully disconnect speaker connector.

Step 8



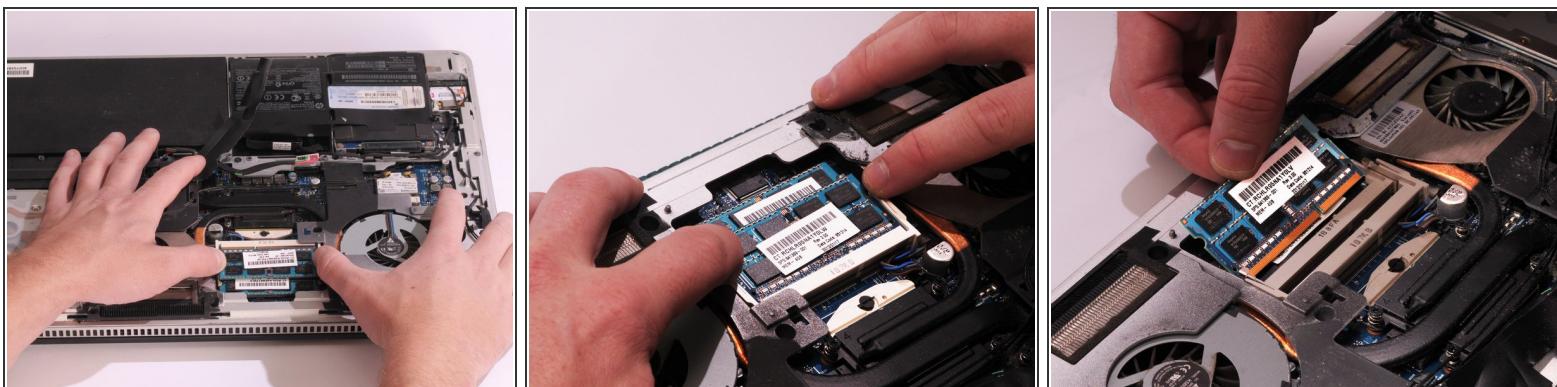
- Carefully disconnect the connecting cable by lifting the white clamp with a Flathead screwdriver and pulling on the blue tab away from connector.

Step 9 — Subwoofer



- Unscrew the three 6.5mm Phillips shoulder screws that connect the subwoofer to the computer.
- Disconnect the red and black subwoofer cable from the system board by pulling it upwards.
- Remove the subwoofer by pulling straight up from the main assembly.

Step 10 — RAM



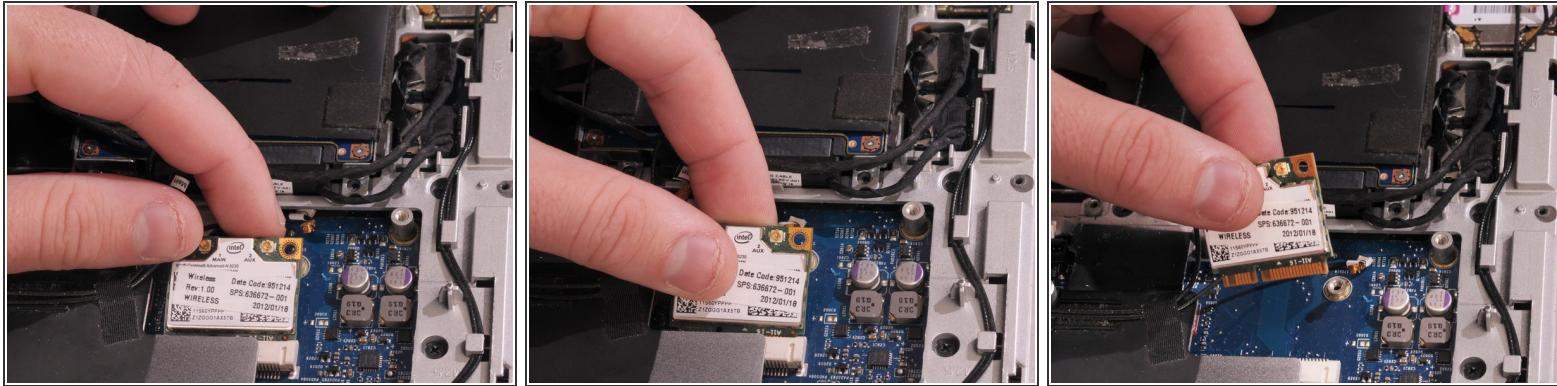
- Press down on both tabs on either side of the top RAM stick.
- The RAM will slightly pop out and you will be able to slide it out of its cavity.
- Repeat the same process for the second stick of RAM if needed.

Step 11 — Wireless Card



- Unscrew 4.5mm Phillips screw.
- Unplug both antenna connectors by carefully pulling them upwards.
- *(i)* During re-assembly make sure to match numbers(1 or 2) on the antenna cable and the wireless card.

Step 12



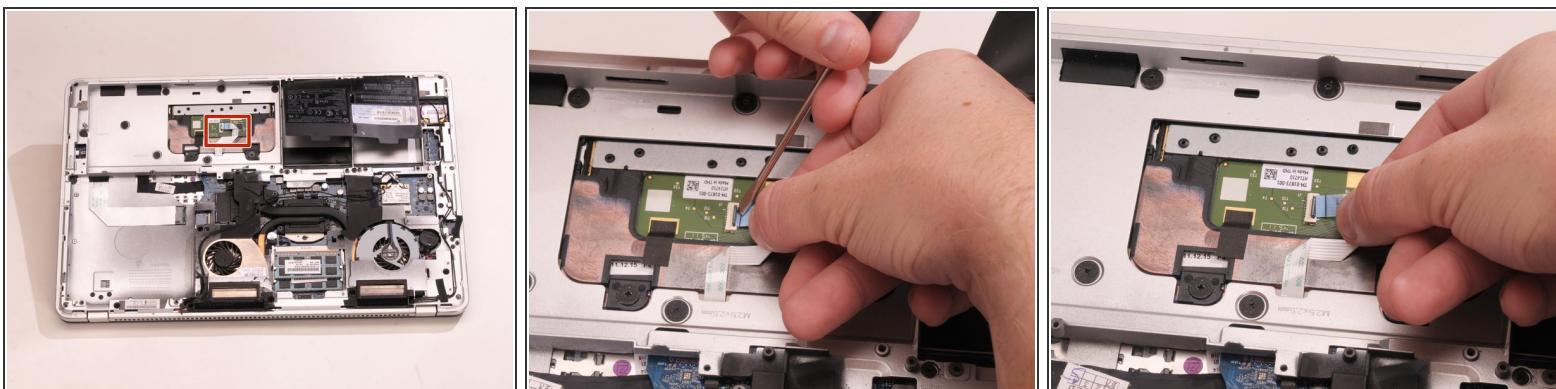
- Pull wireless card up and away from you.

Step 13 — CMOS Battery



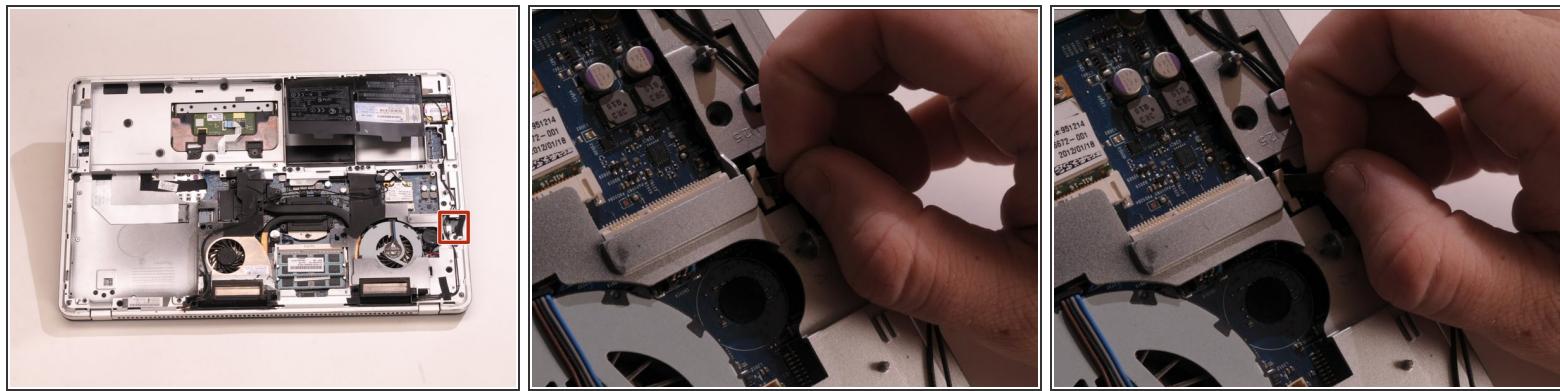
- Unplug CMOS battery by gently pulling upwards on it's cable.

Step 14 — Top Cover



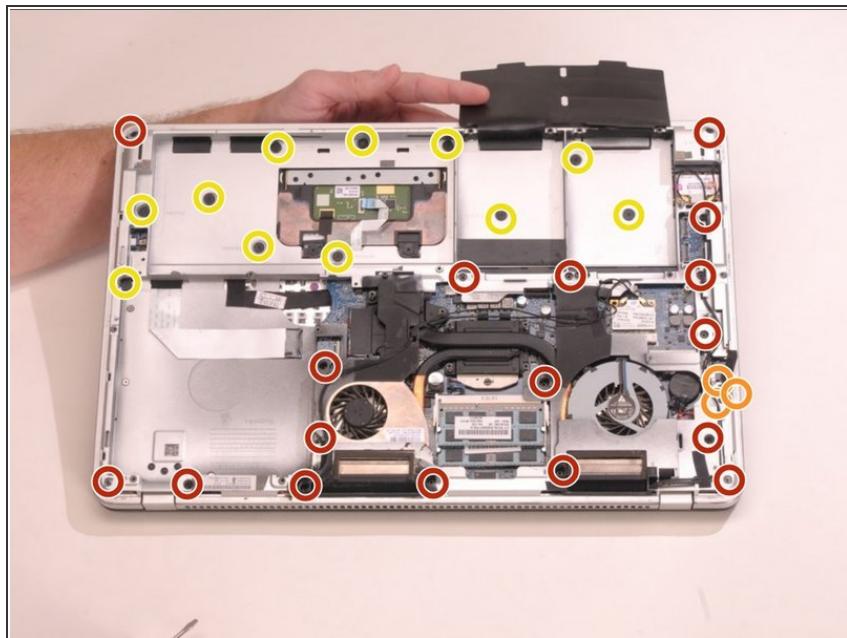
- Remove the first connector by lifting the white clamp with a Flathead screwdriver and pulling the connector to your right.

Step 15



- Remove the second connector by gently pulling upward.

Step 16



- Remove the seventeen 6.6mm Phillips screws.
- Remove the three 3.6 mm Phillips screws.
- Remove the eleven 3.2mm Phillips screws

ⓘ Three of the 3.2mm Phillips screws are located underneath the black hard drive flap.

ⓘ Make sure that you keep the screws organized so that you keep track of all of the different sizes and locations.

Step 17



- Flip the laptop over.
- Use a Plastic Opening tool to carefully pry all around the top cover up off of the remaining assembly.
- *(i)* Starting location for prying does not matter as long as you pry all around the frame before lifting it off.

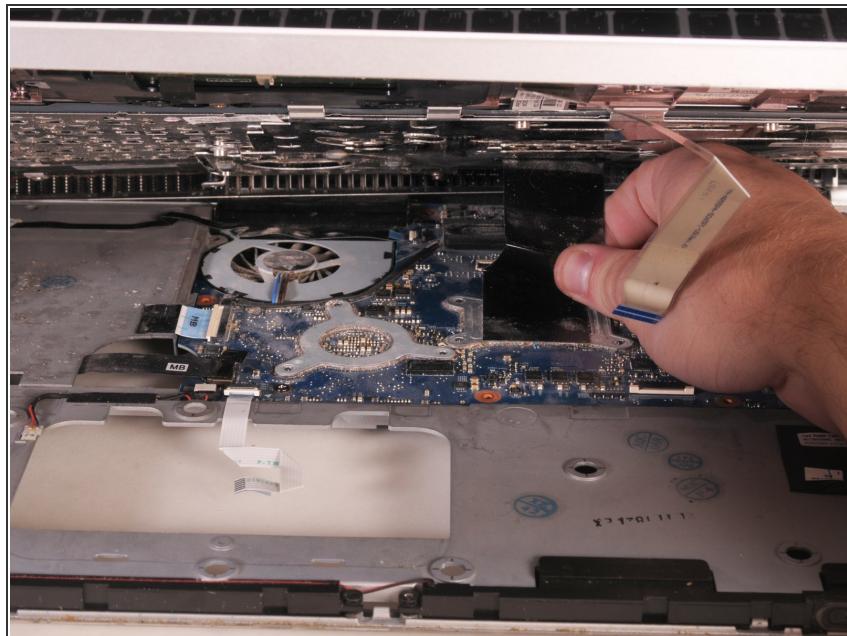
⚠ Do not fully lift the top cover because there are cables that will need to be disconnected before removal.

Step 18



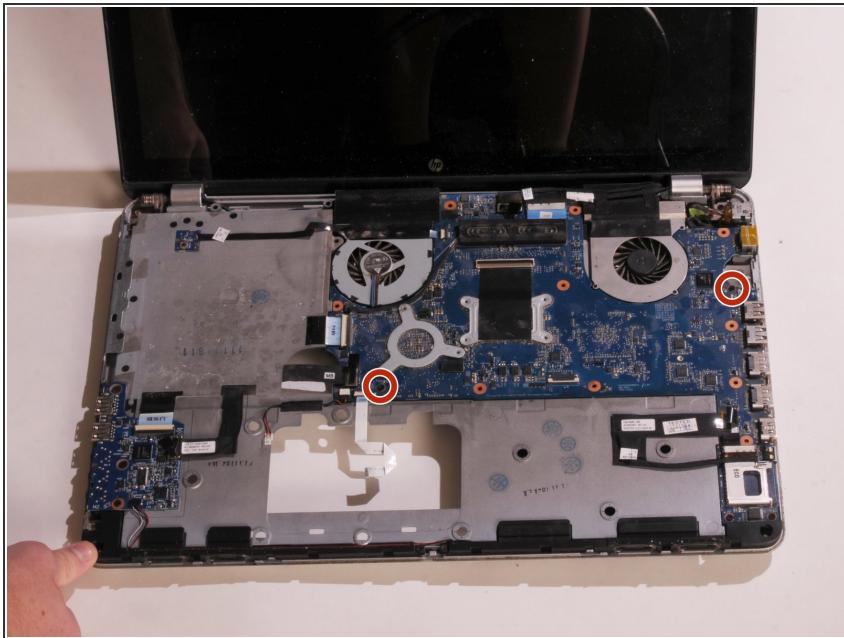
- Gently pull the white connector shown in the picture towards you to disconnect it from the system board.

Step 19



- Gently pull the black connector towards you to disconnect the top cover from the main assembly.
- Once both connectors are disconnected, lift the top cover off of the main assembly.

Step 20 — Disassembling HP Envy 17-3070NR Motherboard Assembly



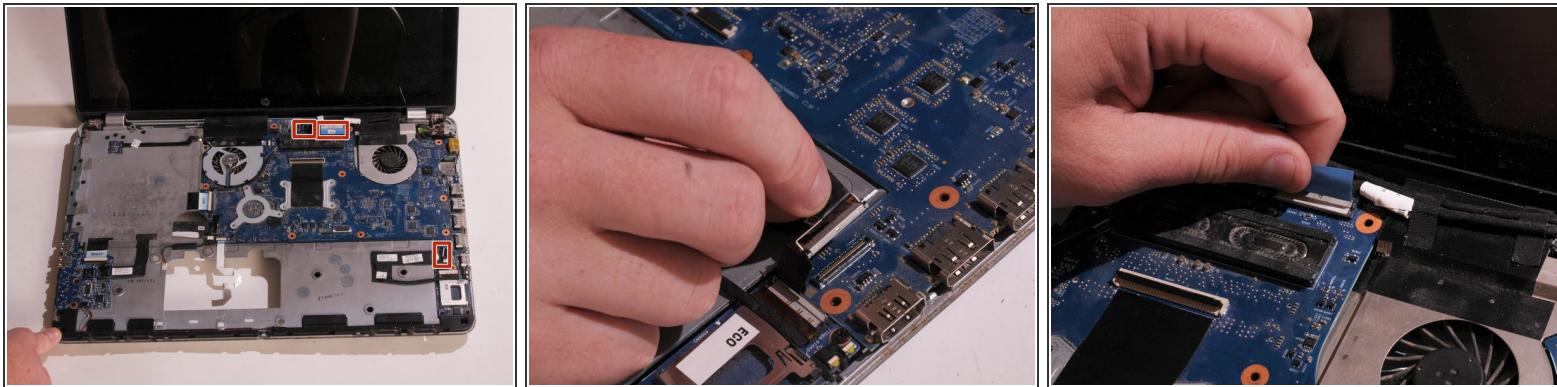
- Remove the two 4.5mm Phillips screws from the system board

Step 21



- Disconnect three cables by lifting a white clamp with a Flathead screwdriver and pulling on the blue tab.

Step 22



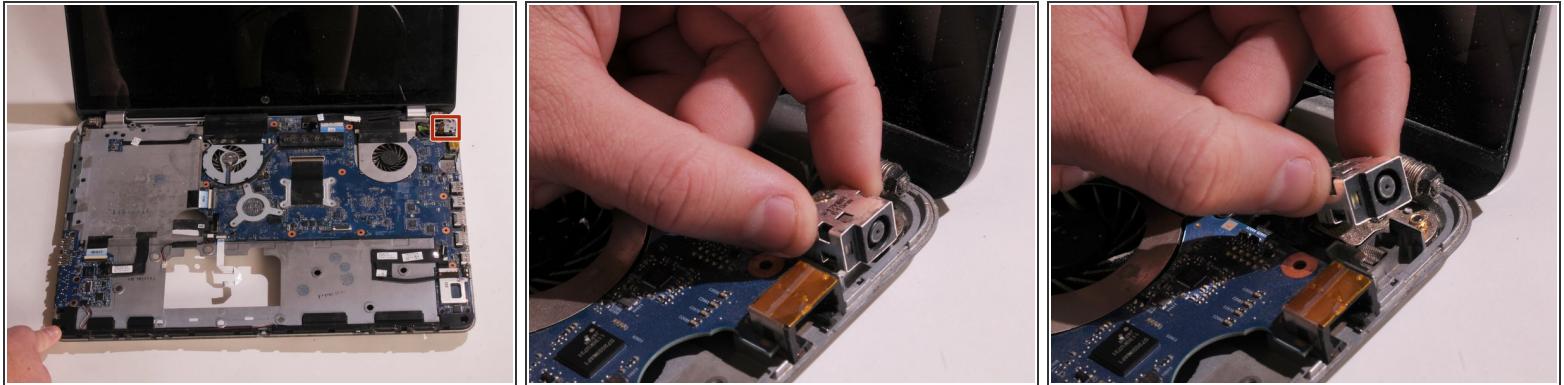
- Disconnect three cables by pulling upward on black or blue tabs connected to them.

Step 23



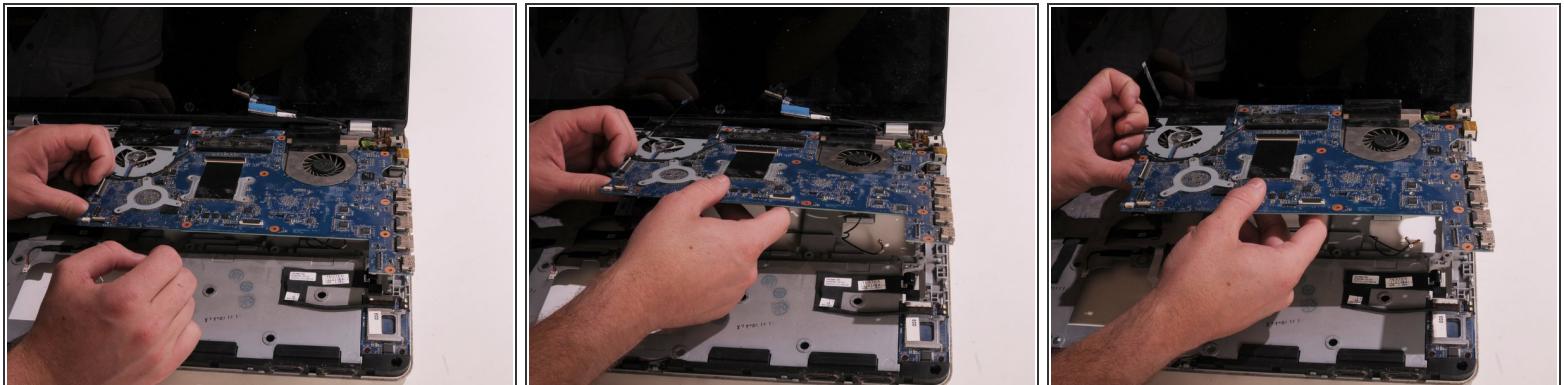
- Disconnect cable by using a Flathead screwdriver to gently pry it off the black connector towards you.

Step 24



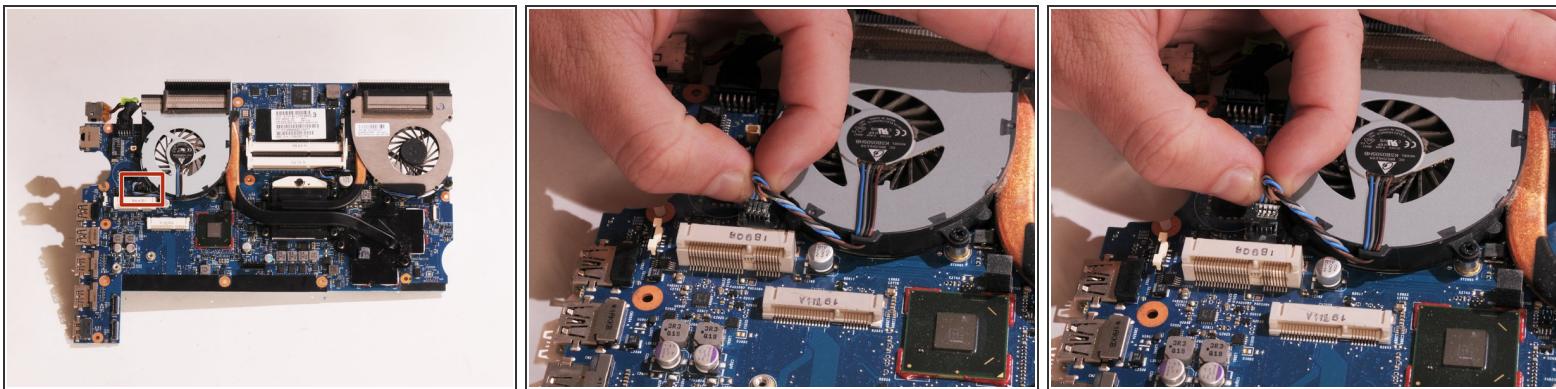
- Lift up the power connector from the clip.

Step 25



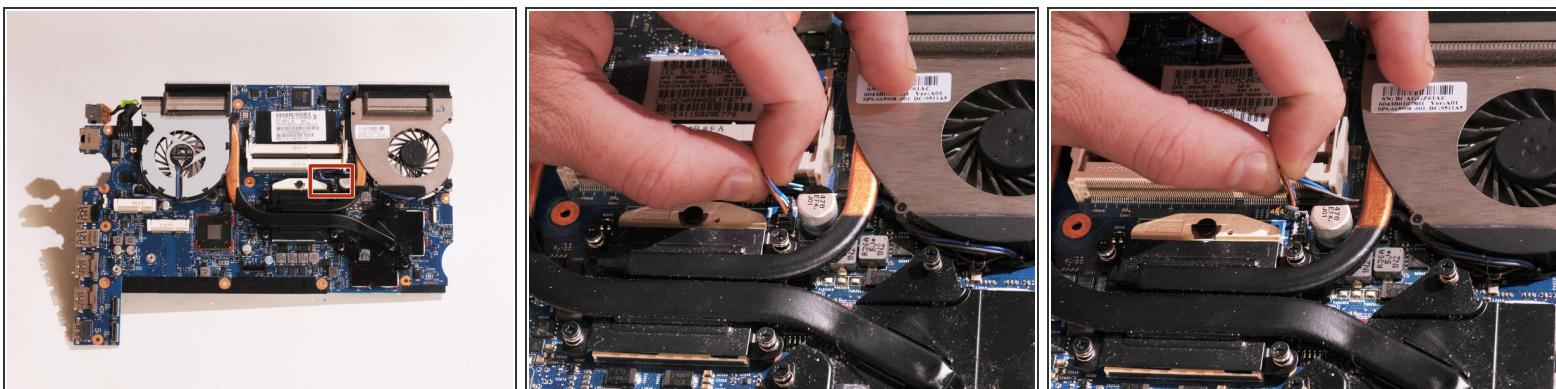
- Carefully lift up motherboard from the main assembly.

Step 26 — Fan Assembly



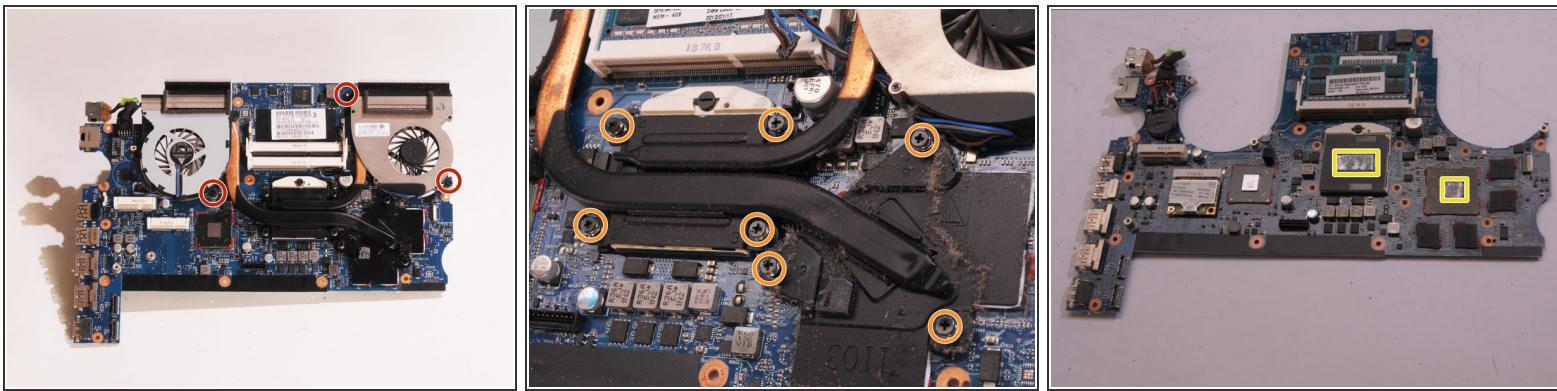
- Flip the system board over.
- Unplug the first fan assembly cable by carefully pulling it upwards.

Step 27



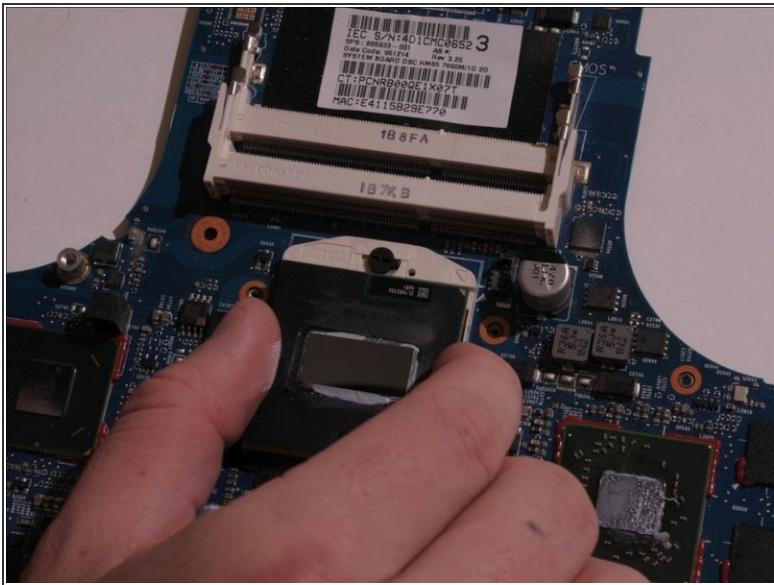
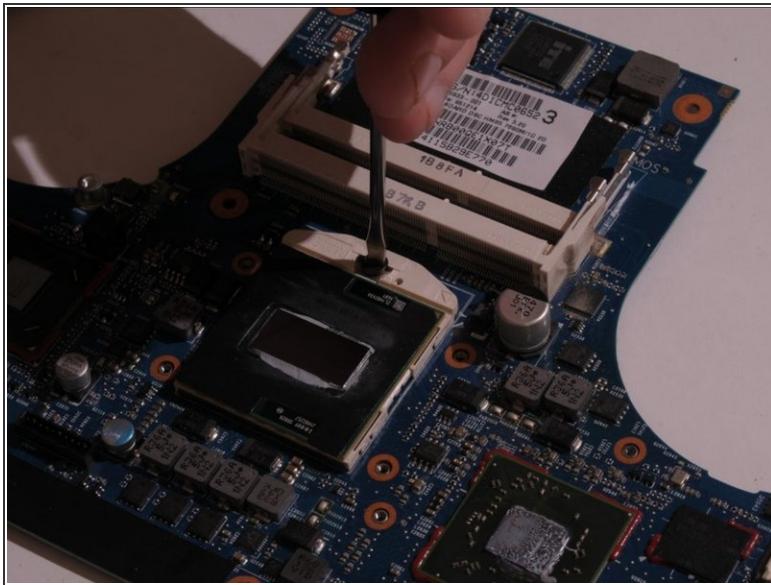
- Unplug the second fan assembly cable by carefully pulling it upwards.

Step 28



- Remove the three 4.5mm Phillips screws on the fan assembly.
- Loosen the seven captive Phillips screws in the ascending numerical order (1-7). Numbers are printed next to each screw on the housing.
- ***i*** Screws will not fully come off the assembly. You need to only loosen them.
- Remove the fan assembly from the system board by lifting it straight up.
- ***i*** For reassembly, you will need to clean the old thermal paste off of areas highlighted in yellow as well as matching parts on the fan assembly. Following that, you would need to reapply thermal paste before putting back the fan assembly. Small amount of the size of the rice grain should be enough for each plate.

Step 29 — Motherboard

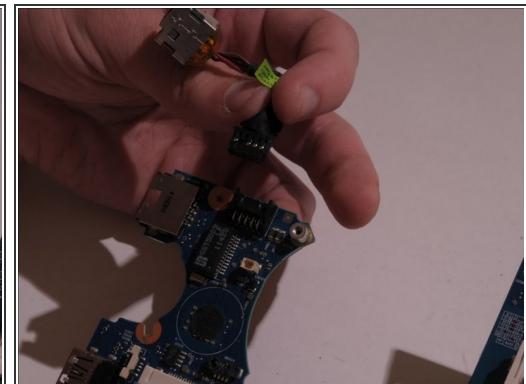
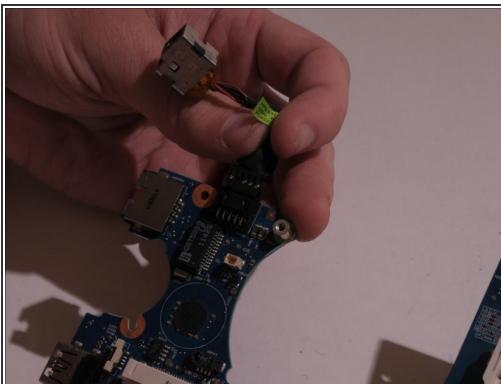
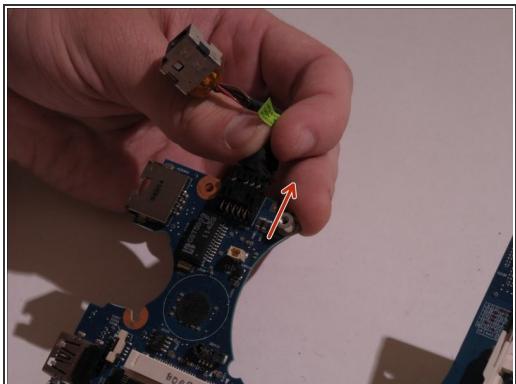


- Unlock CPU by turning the locking screw 180 degrees counterclockwise using Flathead screwdriver. You will hear a slight click when CPU is fully unlocked.
- Carefully lift CPU upwards by holding it from both sides.

! It is important to lift CPU straight upward in order to not bend any pins on it.

i For reassembly, make sure to put CPU back by matching a small yellow triangle in the corner of CPU to the small triangle imprinted on the CPU socket.

Step 30



- Detach the power connector by pulling it away from the motherboard.

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