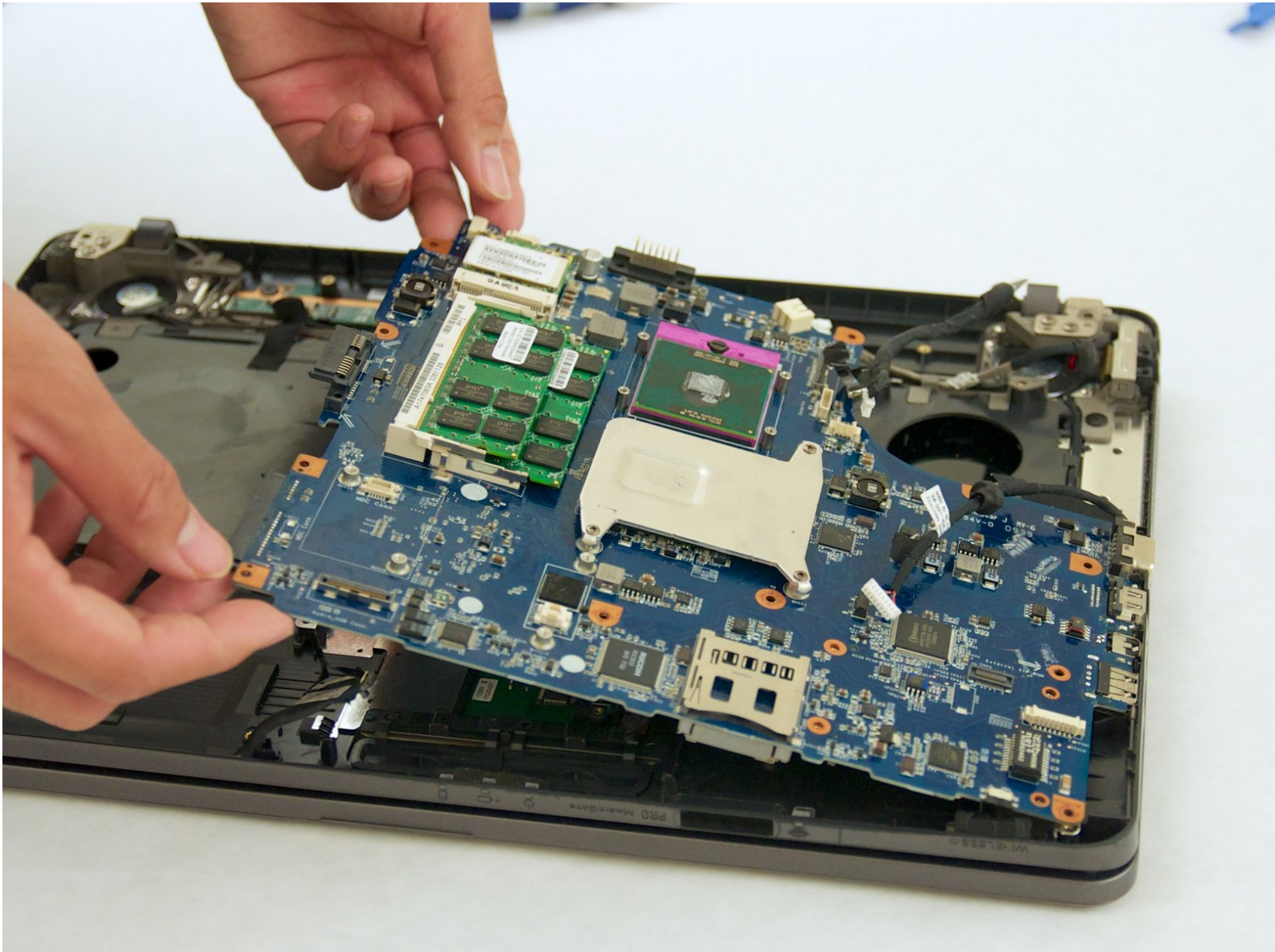# Sony Vaio PCG-7184L (VGN-NW240F) Motherboard Replacement

This guide will show you how to replace the motherboard of your laptop.

Written By: Kevin McGowan

INTRODUCTION

If the motherboard malfunctions, it may need to be replaced, however, such a situation is relatively rare. Please check for other issues before determining if the motherboard is faulty.
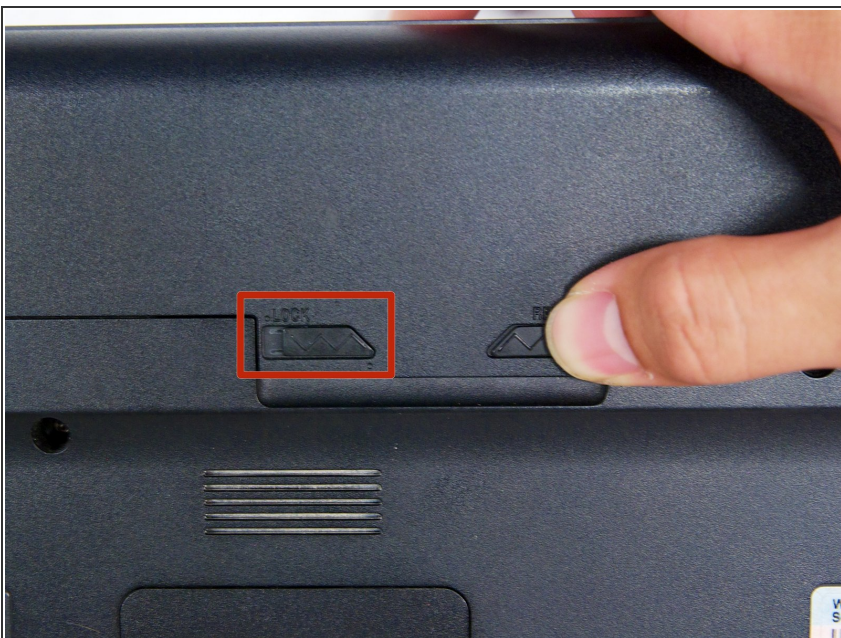
🔧 TOOLS:

- Phillips #1 Screwdriver (1)
- Spudger (1)

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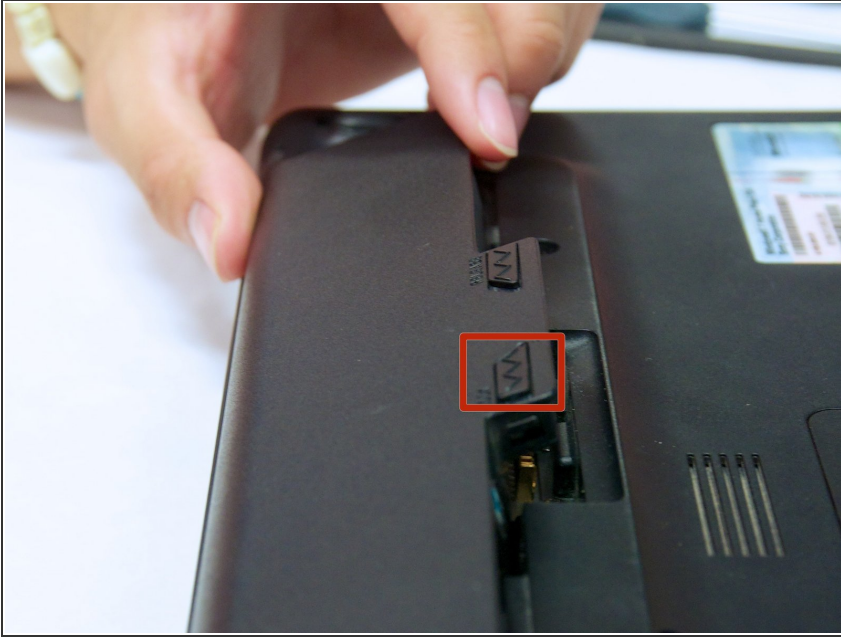
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Step 1 — Battery

- Power off the laptop.

- Unplug the charging cable and any other cables plugged into the laptop.

⚠️ Failure to remove or unplug any cables could result in electric shock.

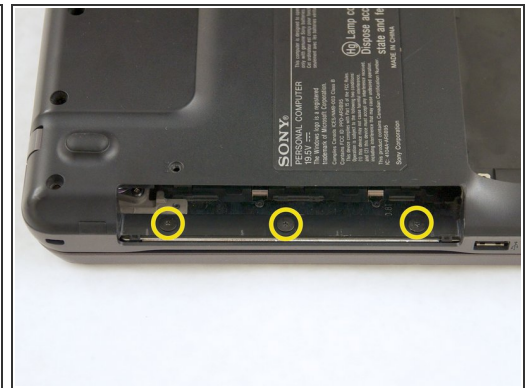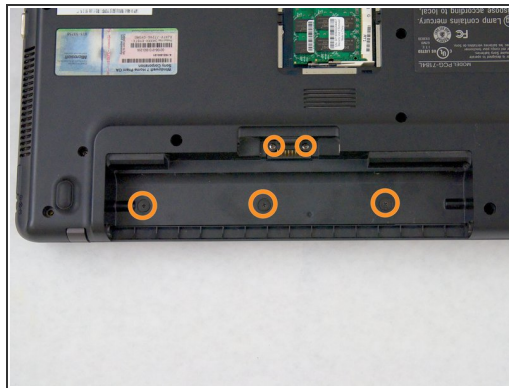- Turn the laptop over so that the back panel is facing upwards.

Step 2

- Locate two switches above the battery that lock it into place.

- Push the left-hand switch, that says "lock" above it, so that it is unlocked.
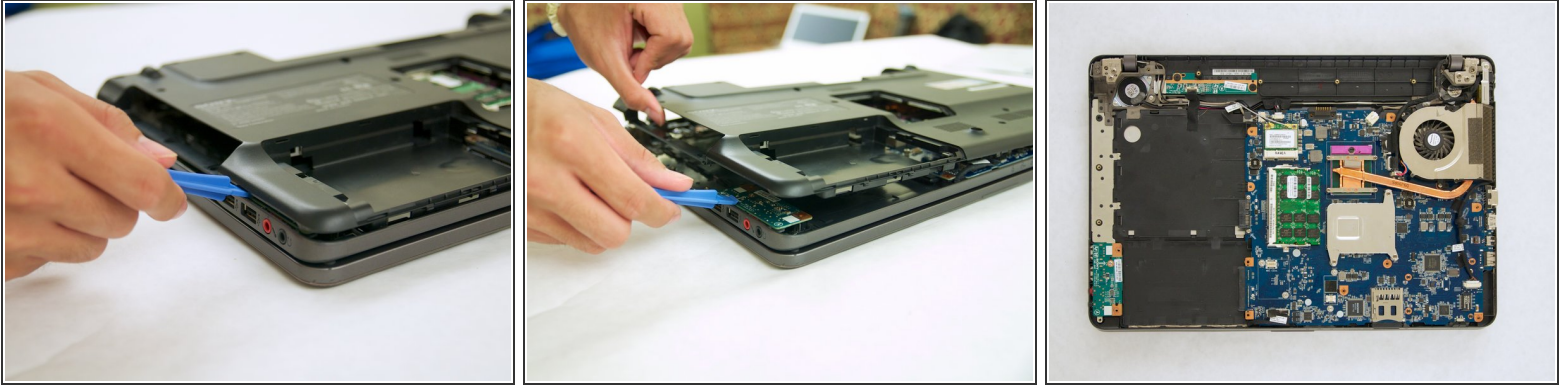
Step 3

- Push and hold the right-hand switch, which says "release" above it, and lift the battery up out of its place.

Step 4 — Back Panel

- Remove all the 8mm Phillips #1 screws on the backside of the laptop.

- There are three 3mm and two 5.3mm screws under the battery that also need to be taken out.

- There are three 3mm screws under the optical drives that also need to be taken out.

- Remove the RAM panel in addition to the other screws. For further instructions, refer to the RAM replacement guide.
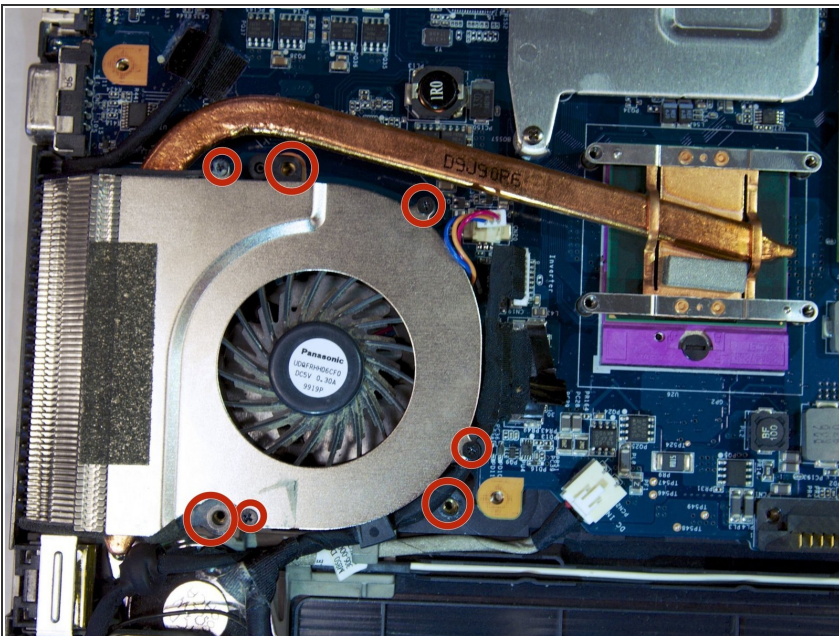
Step 5

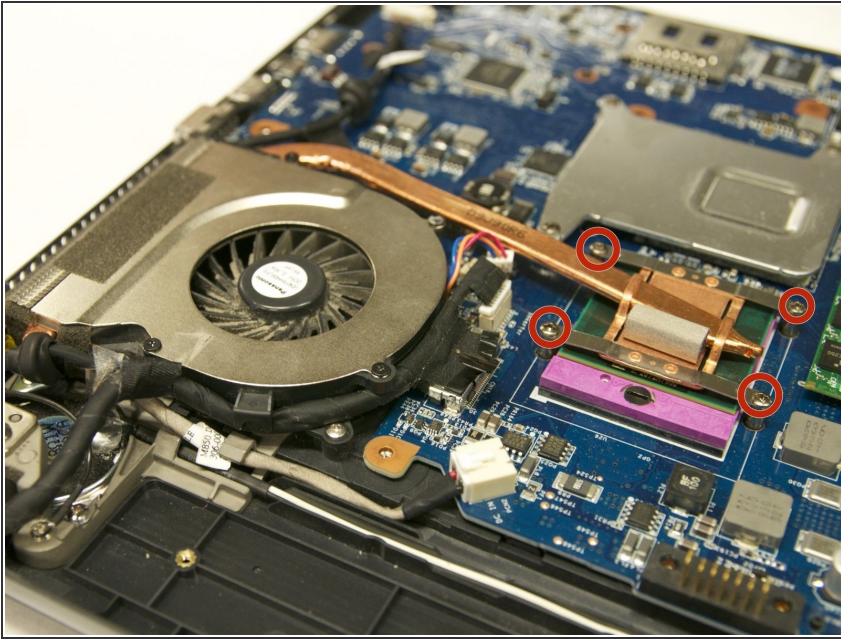- Pry along the edges of the back panel using the spudger.

⚠ If you are struggling to remove the back panel with a moderate amount of force, do NOT apply any additional force, instead double check to make sure all the screws were removed before attempting again.
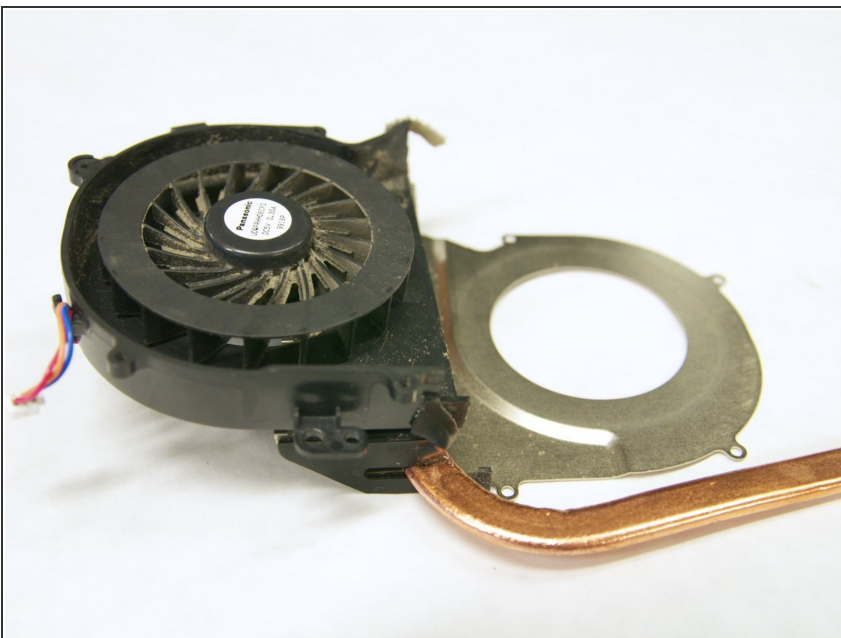
Step 6 — Fan

- Locate and remove three 5.3 mm Phillips #1 screws on the bottom of the fan.

- Locate and remove the four 5.3 mm Phillips #1 screws on the top of the fan.
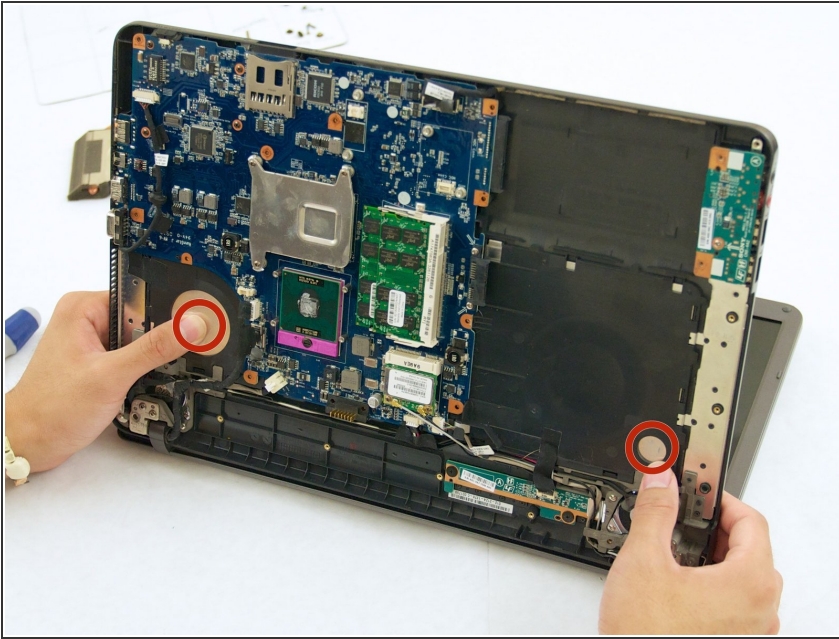
Step 7

- Locate and remove the four 3mm Phillips #1 screws above the processor and attached to the bronze heat-pipes.

- Gently lift up the fan and heatsink from the the laptop.

- ⚠ If the fan and heatsink will not lift up with ease, do NOT apply any additional force. Check again to see if all necessary screws are removed.

Step 8

- The fan attached onto the heat sink with electrical tape. Removing the electrical tape allows you to replace the fan.

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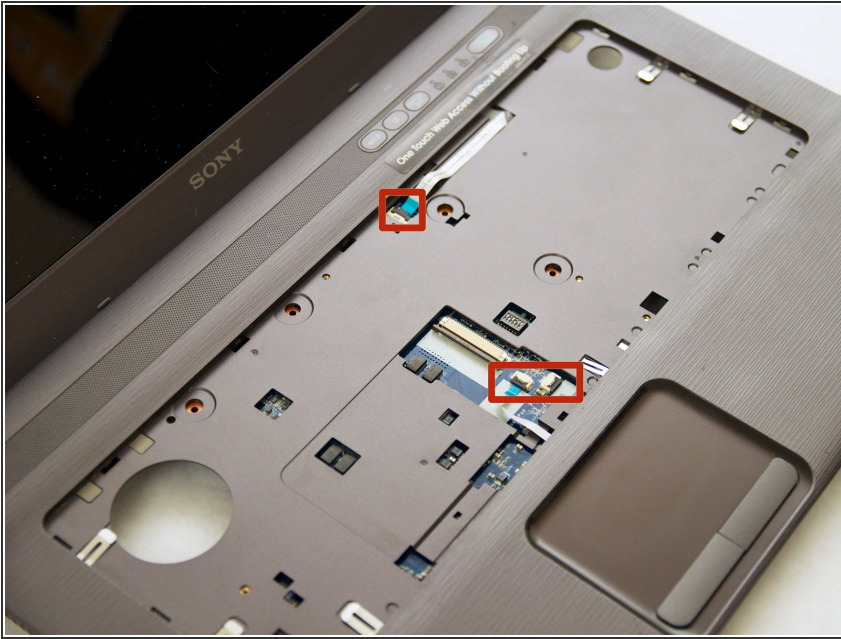
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Step 9 — Keyboard

- Locate the two highlighted circular openings and push the keyboard out.

⚠️ There is a ribbon cable attaching the keyboard to the back of the motherboard. Avoid damaging the ribbon when pushing out the keyboard.
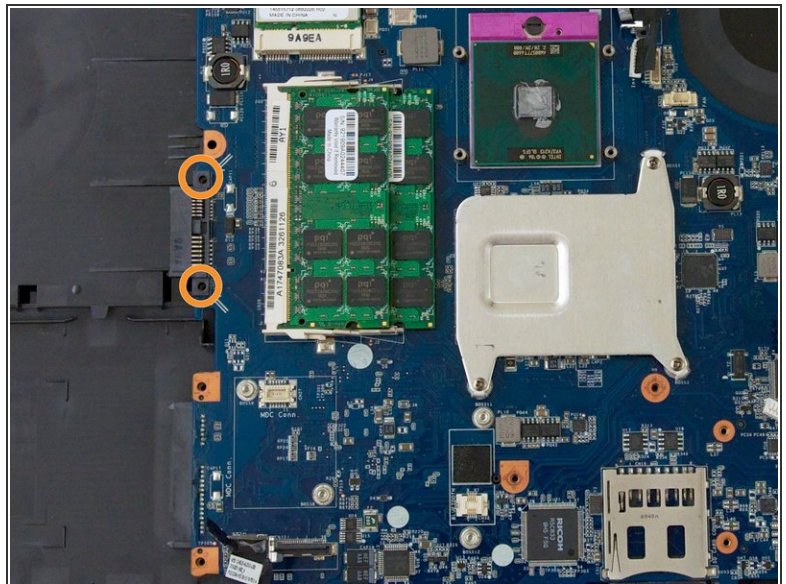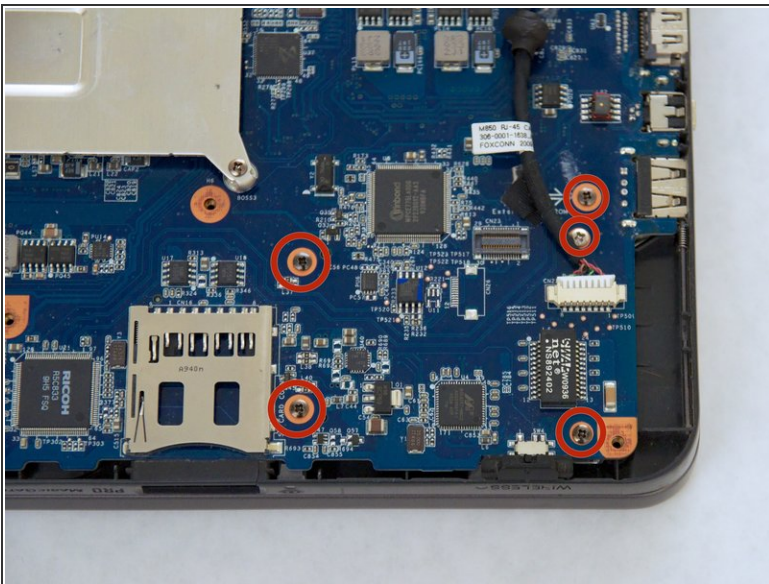
Step 10

- Detach the ribbon cable to separate the keyboard from the laptop.

- Push open the brown clamp at the base of the ribbon to release it.
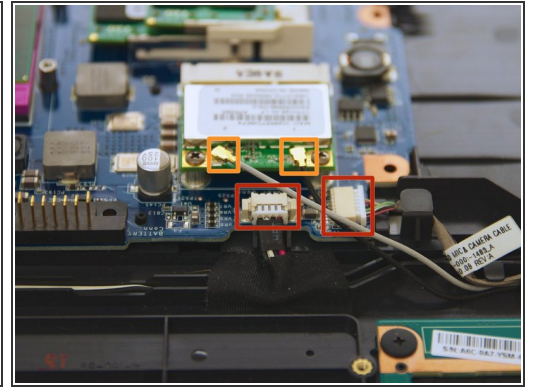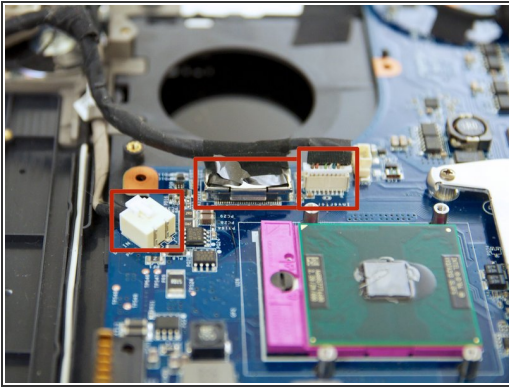
Step 11 — Motherboard

- Remove the highlighted ribbon cables from their place underneath the keyboard. To do so, lift up on the black clamps to release the cables.
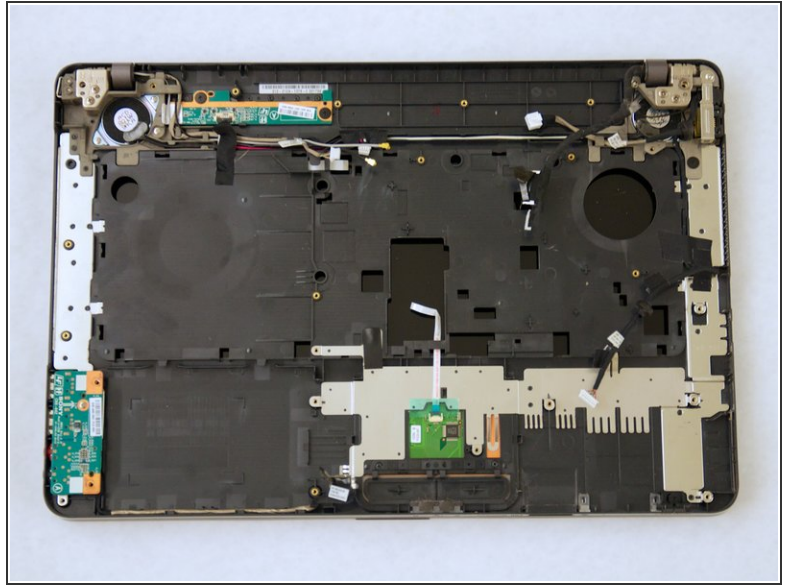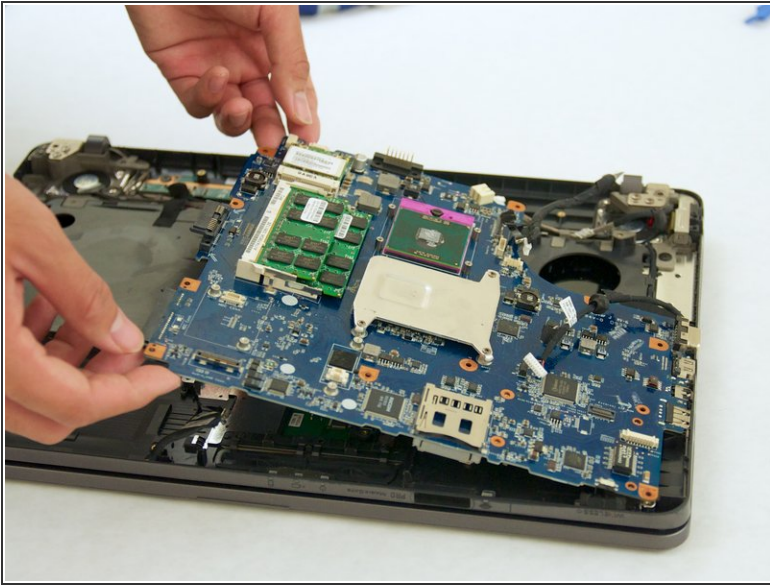
Step 12

- Remove the highlighted 3mm Phillips #1 screws.

- Remove the two 8mm Phillips #1 screws that are highlighted.

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Step 13

- Detach all of the highlighted connectors.

- If the connector has a plastic cable, use it to assist in removal.

- Detach the black and grey network card cables.

Step 14

- Carefully lift up the motherboard from its place.

- ⓘ The USB input/output area sits within the back plate of the laptop. To ensure safe removal, lift up and pull away from the USB input panel.

- ⚠ If the motherboard does lift up or come out easily, do not apply any additional force. Check again for any unattached cables or connects before attempting again.

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