



Dell XPS 14 L401X CPU Replacement

This guide will show how to replace the CPU (Central Processing Unit) on the Dell XPS 14 L401X laptop.

Written By: Mark



INTRODUCTION

You may want to replace your processor if it has failed or you are looking to upgrade your existing processor to another compatible CPU.

TOOLS:

- [JIS #1](#) (1)
- [Spudger](#) (1)
- [iFixit Opening Tools](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Flathead 3/32" or 2.5 mm Screwdriver](#) (1)

Step 1 — Battery



⚠ Make sure that the laptop is shut off before attempting to remove any components from the device.

ⓘ The laptop in this example did not have a battery equipped.

- Locate the spring latch on the bottom of the device that will unlatch the battery.
- Hold the spring latch in the open position with one hand, and support the battery with the other hand.
- Turn the laptop over and allow the battery to fall out of its holder and into your hand.

Step 2 — RAM



- Use a JIS 1 screwdriver to loosen the (2) captive screws from the panel.
- *(i)* The captive screws will not come off of the panel.
- Pull the panel upwards and towards the battery to remove.
- Put the panel to the side, exposing the RAM.

Step 3



- The RAM is held by two spring clips. Pull at the two spring clips and the RAM will move upwards.
- *i* Keep your fingers on the edge of the chip.
- ⚠ Only handle the RAM by the sides! Do not touch the circuits or the terminals to avoid contamination!

Step 4 — Optical Drive



- Locate and remove (1) 8.5mm JIS 1 screw at the top left corner of the RAM bay.

Step 5



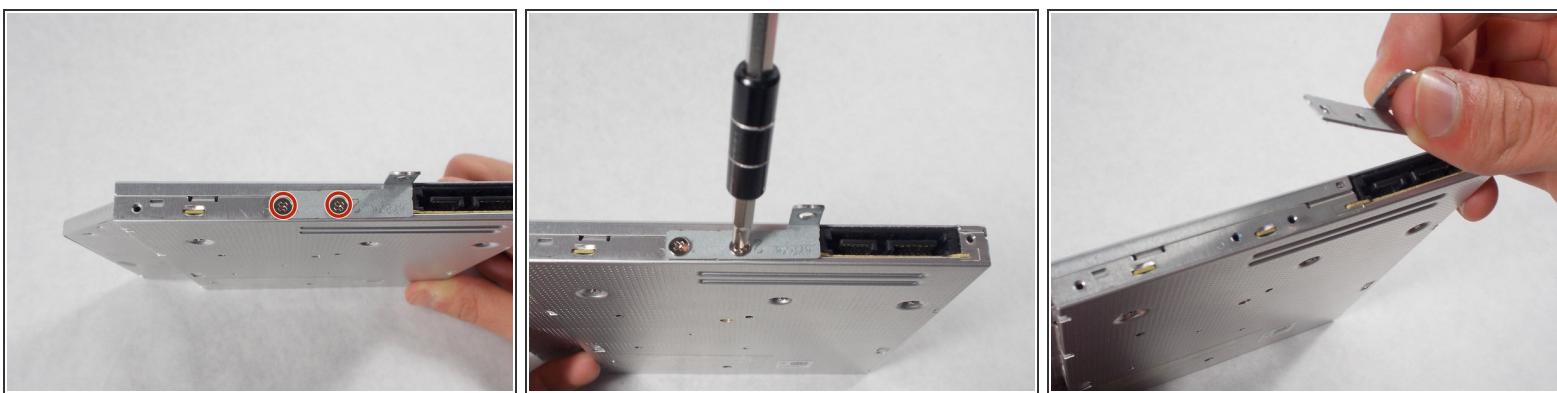
- Carefully pull out the optical drive from its bay.

Step 6



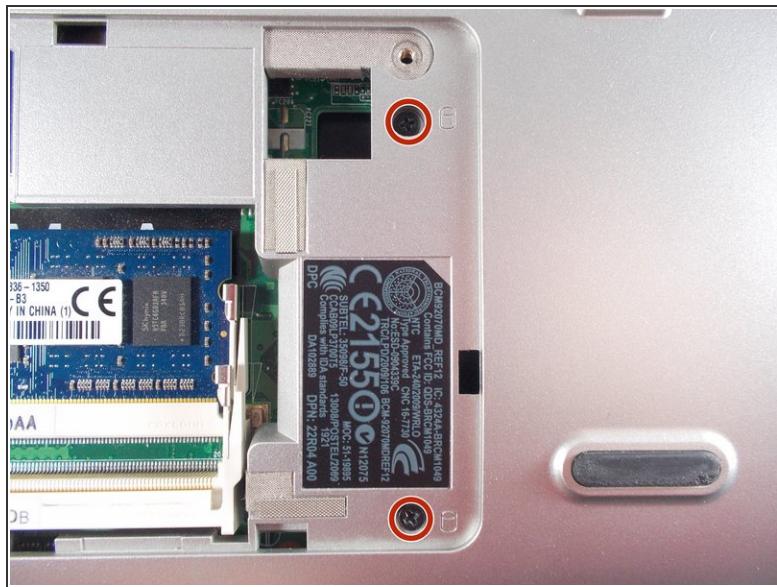
- Carefully pull off the decorative cover from the front of the optical drive.
- ⓘ This decorative cover will be transferred to the new optical drive.

Step 7



- Use a JIS 1 screwdriver to remove (2) 2mm screws on the drive's anchoring bracket.
- ⓘ This bracket will be transferred to the new optical drive.

Step 8 — Hard Drive



- Use a JIS 1 screwdriver to remove (2) 2.5mm screws located on the right side of the RAM bay.

Step 9



- Push the hard drive to the right with a spudger to unseat it from its socket while pulling out the hard drive with your other hand.

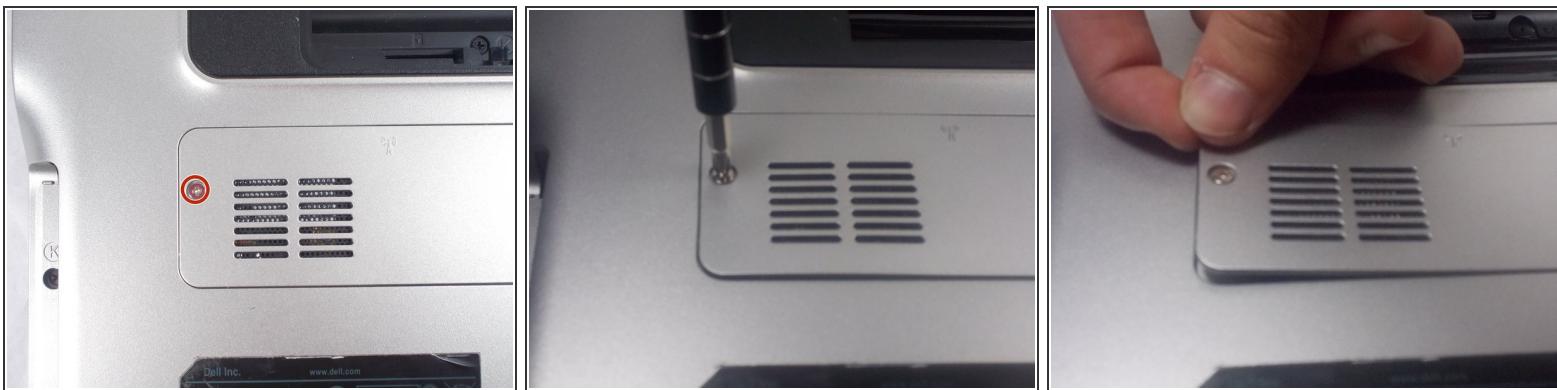
Step 10



- Use a JIS 1 screwdriver to remove (1) 2.5mm screw attaching the plastic cosmetic cover to the hard drive.
- Detach the plastic cosmetic cover from the hard drive.

(i) This cosmetic cover will be transferred to the new hard drive.

Step 11 — Mini Card



- Locate the mini card access panel marked with a radio tower emblem on the bottom of the laptop near the battery bay.
- Use a JIS 1 screwdriver to loosen the captive screw securing the panel to the device.

(i) The captive screw will not come off of the panel.

- Carefully remove the panel by prying it upwards, unlocking it from the tabs that are securing it in place.

Step 12



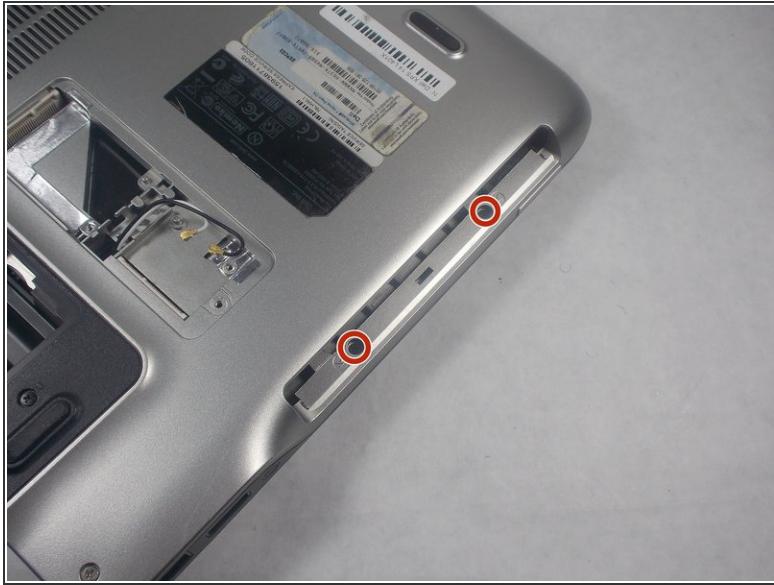
- Disconnect the two wires on the mini card by carefully plucking them upwards by the metal contact points at the terminals.
- ⚠ Do not pluck the contacts off of the terminals by pulling on the wires, this can damage the cables.
- Remove (1) 2mm screw from the bottom left corner of the mini card with a JIS 1 screwdriver.

Step 13



- Remove the mini card as it flips upward.

Step 14 — Palm Rest



- Remove two 4.5mm screws with JIS 1 screwdriver marked by the letter "K" in the optical drive bay.

Step 15



- Remove (2) 4.5mm screws with JIS 1 screwdriver marked by the letter "K" in the hard drive bay.

Step 16



- Remove (2) 4.5mm screws with JIS 1 screwdriver marked by the letter "K" near Battery

Step 17



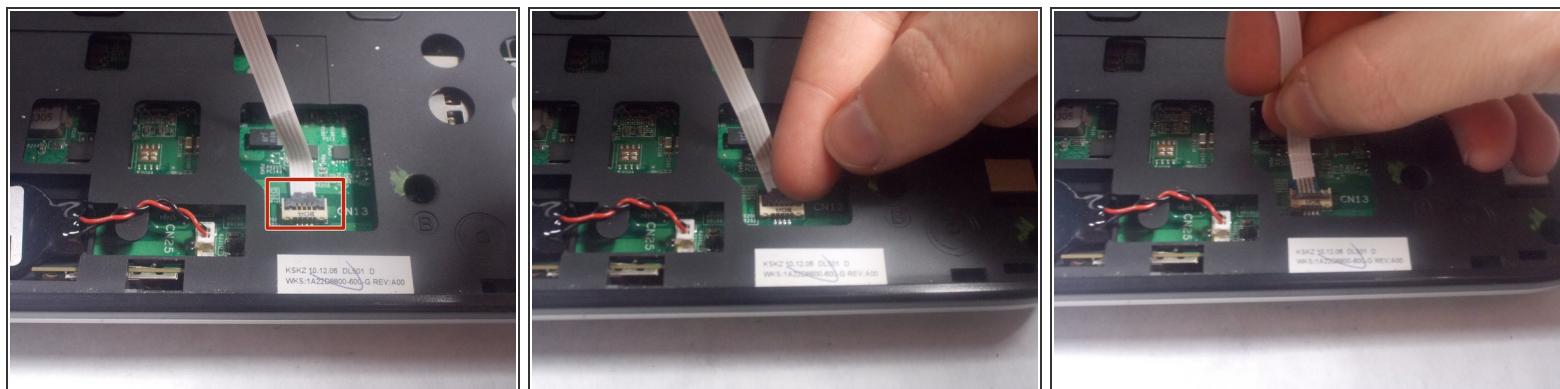
- Remove (1) 7.5mm screw with JIS 1 screwdriver marked by the letter "K" in the RAM bay.

Step 18



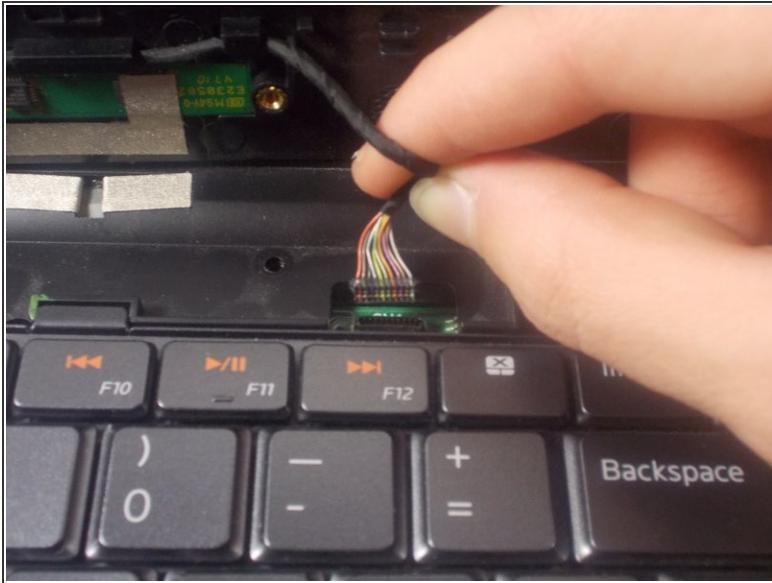
- Open the display to provide room for the palm rest to come out.
- In the hard drive bay, push the "push" pad to lift up the palm rest.

Step 19



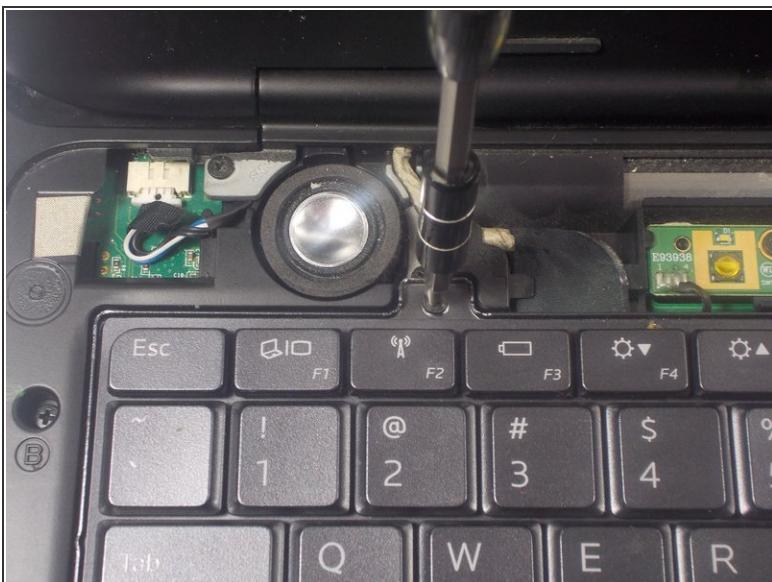
- Disconnect the track pad cable by flipping up the gray clamp and lifting the cable up.

Step 20



- Disconnect the status bar cable by pulling the pin connector upward.
- Finish lifting up the palm rest.

Step 21 — Keyboard



- Use a JIS 1 screwdriver to remove (2) 2.5mm screws located near the top of the keyboard.

Step 22



- Disconnect the keyboard's ribbon cable marked "A" by pushing out the two black tabs towards the ribbon cable.
- Remove the cable from its connection terminal by sliding it out. Finish lifting up the keyboard and set it to the side.

Step 23 — Display



- Disconnect the display ribbon cable by pulling the cable to the right by its sheathed plastic connector.

Step 24



- Use a JIS 1 screwdriver to remove (2) 7mm screws on the underside of the laptop near the battery bay.

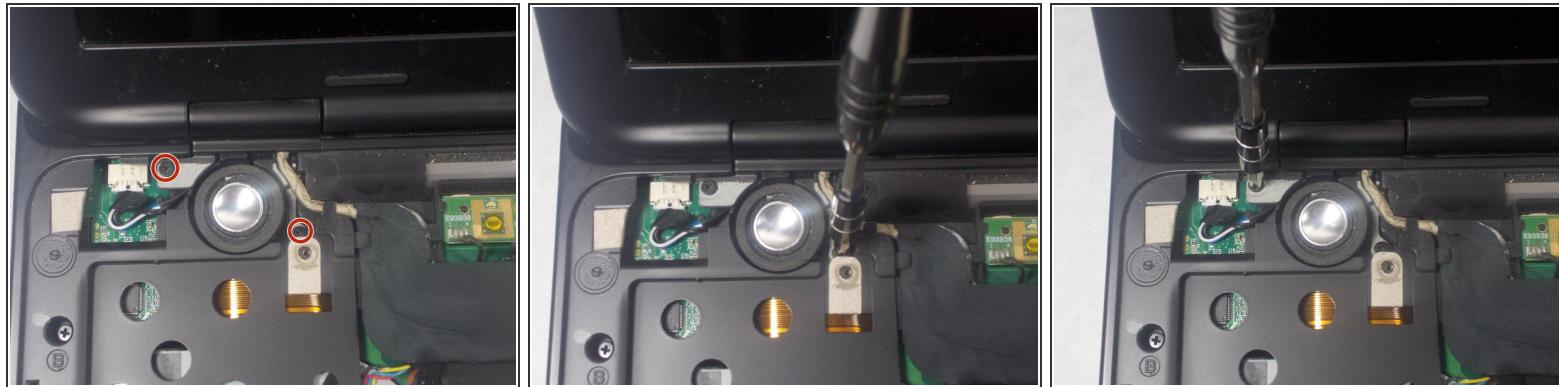
Step 25



- Remove (2) 4mm screws with a JIS 1 screwdriver that are holding down the right side display anchor.

 Be careful not to puncture the speaker membranes with the screwdriver.

Step 26



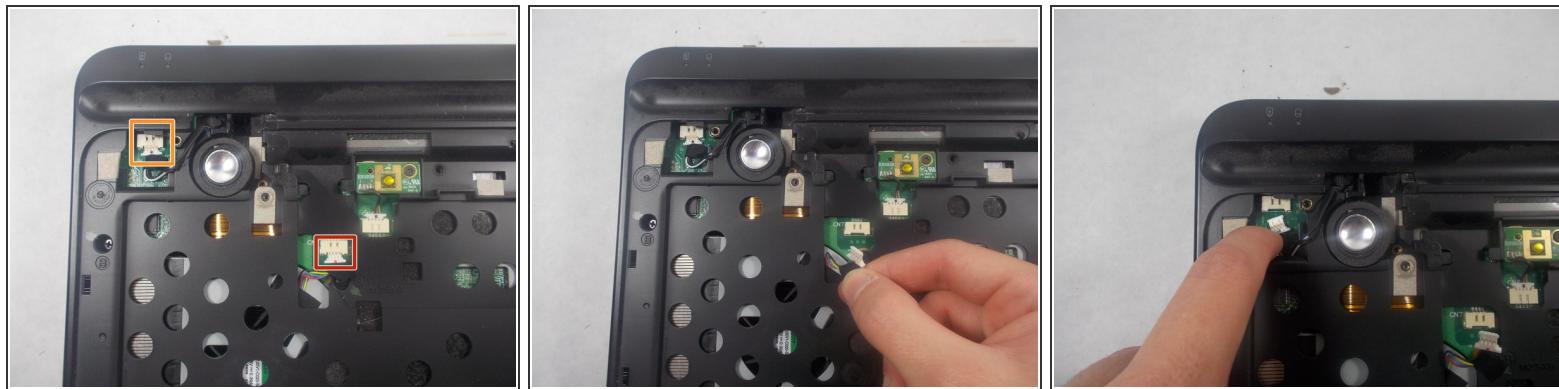
- Remove (2) 4mm screws with a JIS 1 screwdriver that are holding down the left side display anchor.

Step 27



- Lift the display assembly up and off of the main body of the laptop.

Step 28 — Bottom Cover



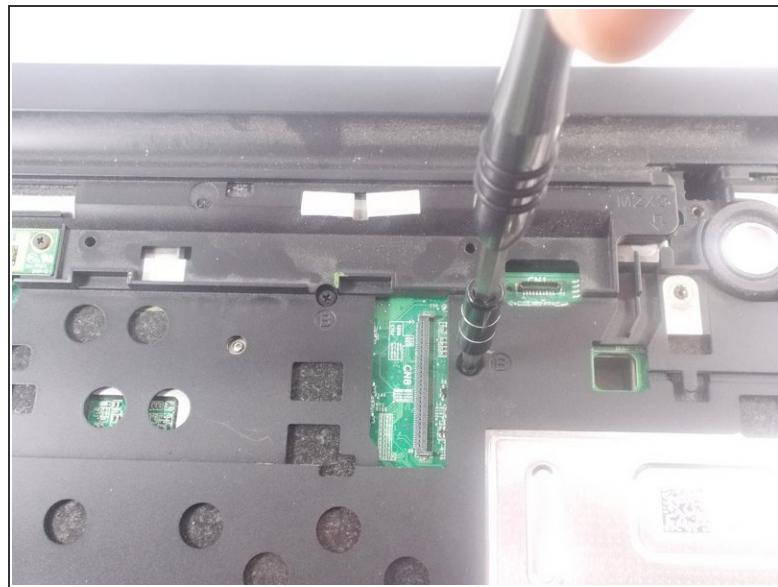
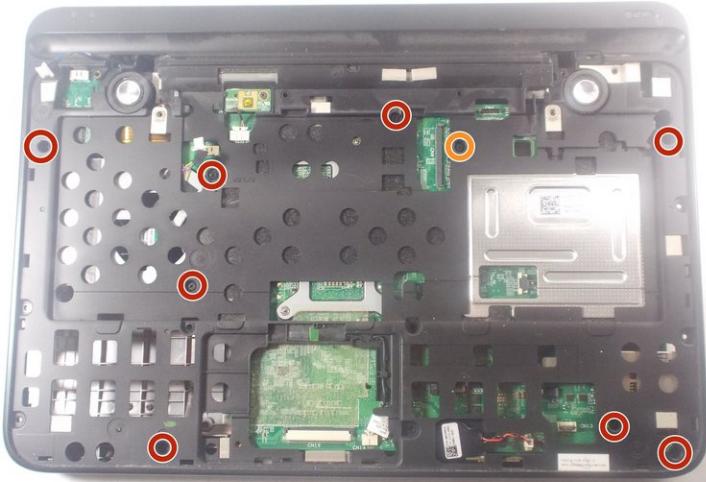
- Disconnect the cooling fan cable.
- Disconnect the speaker power cable.

Step 29



- Remove (2) 15 mm screws located on top left and right corners on either side of the battery bay using a JIS 1 screwdriver.
- Remove (2) 2mm screws located in the battery bay using a JIS 1 screwdriver.

Step 30



- Flip the laptop over.
- Remove (8) 4mm screws marked with the letter "B" with a JIS 1 screwdriver.
- Remove (1) 7mm screw marked with the letter "B" with a JIS 1 screwdriver.

Step 31



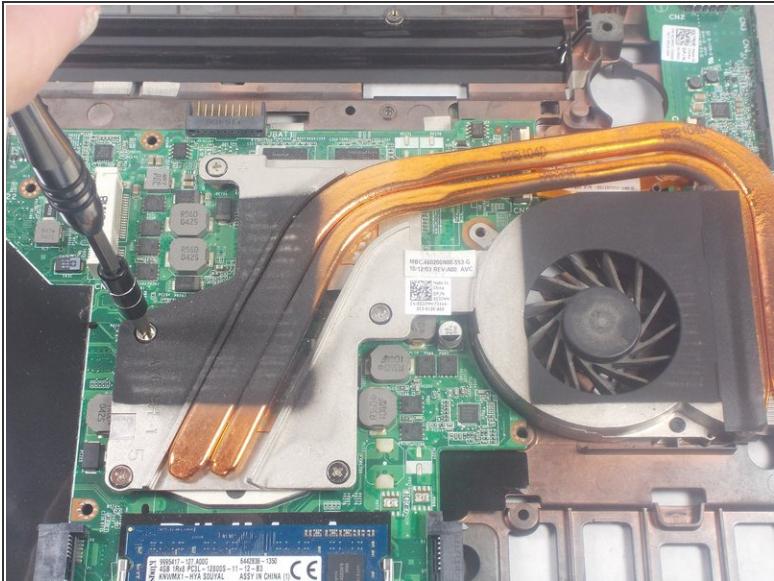
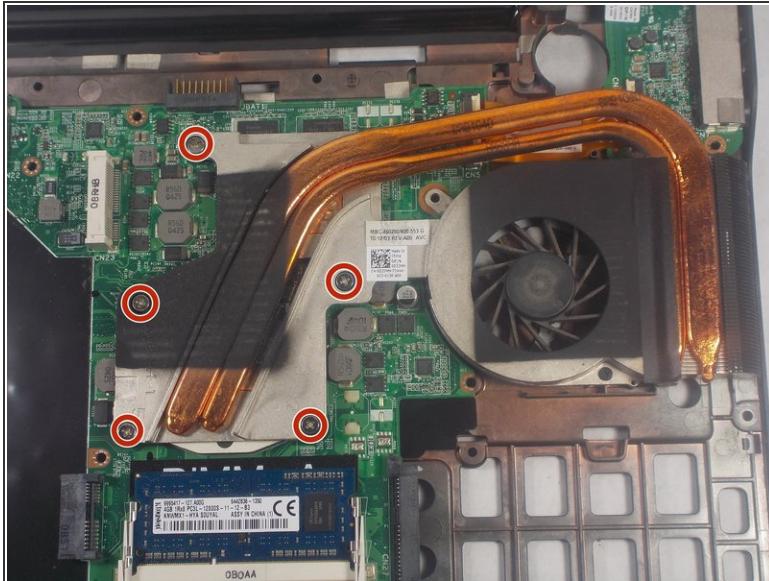
- Separate the bottom cover from the top cover with plastic prying tool and finish lifting the bottom cover off.

Step 32 — Cooling Fan



- Use a JIS 1 screwdriver to remove (1) 4mm screw on the cooling fan assembly.

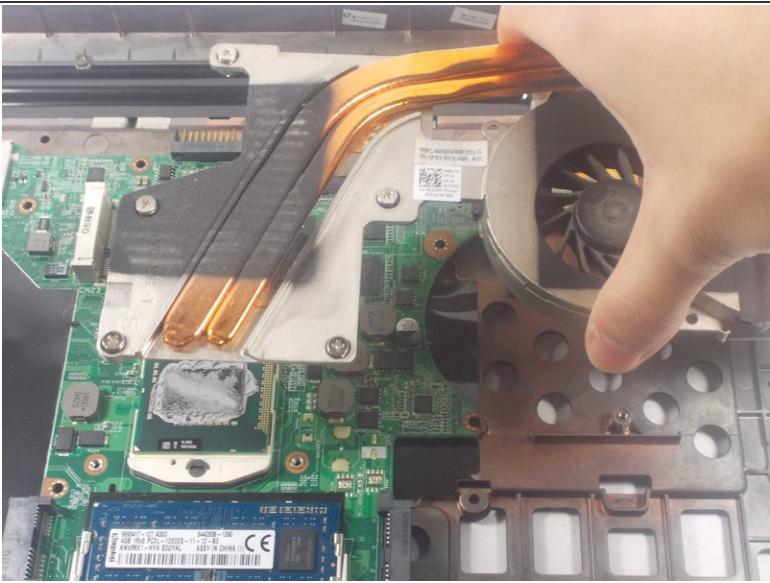
Step 33



- Locate the (5) captive screws that hold down the heat sink assembly to the central processing unit and the graphics processing unit.
- The captive screws are marked 1-5 in consecutive order, and they will not come off of the heat sink when loosened.
- Unscrew captive screw #1 with a JIS 1 screwdriver for one or two turns and move onto the next screw (#2) and so on, in consecutive order.
- Continue to slowly loop around the 5 captive screws in order, only loosening the screws one or two turns each time until all screws are completely retracted.

⚠ Do not loosen any captive screw fully without moving to the other screws first! This can bend the heat sink assembly and possibly damage the processors.

Step 34



- Carefully pull the heat sink assembly upwards off of the motherboard after all the captive screws have been loosened fully.

⚠ Clean off any existing thermal paste from the mating surfaces (CPU, GPU, and the heat-sink itself) and apply new thermal paste, before putting the heat sink back on later.

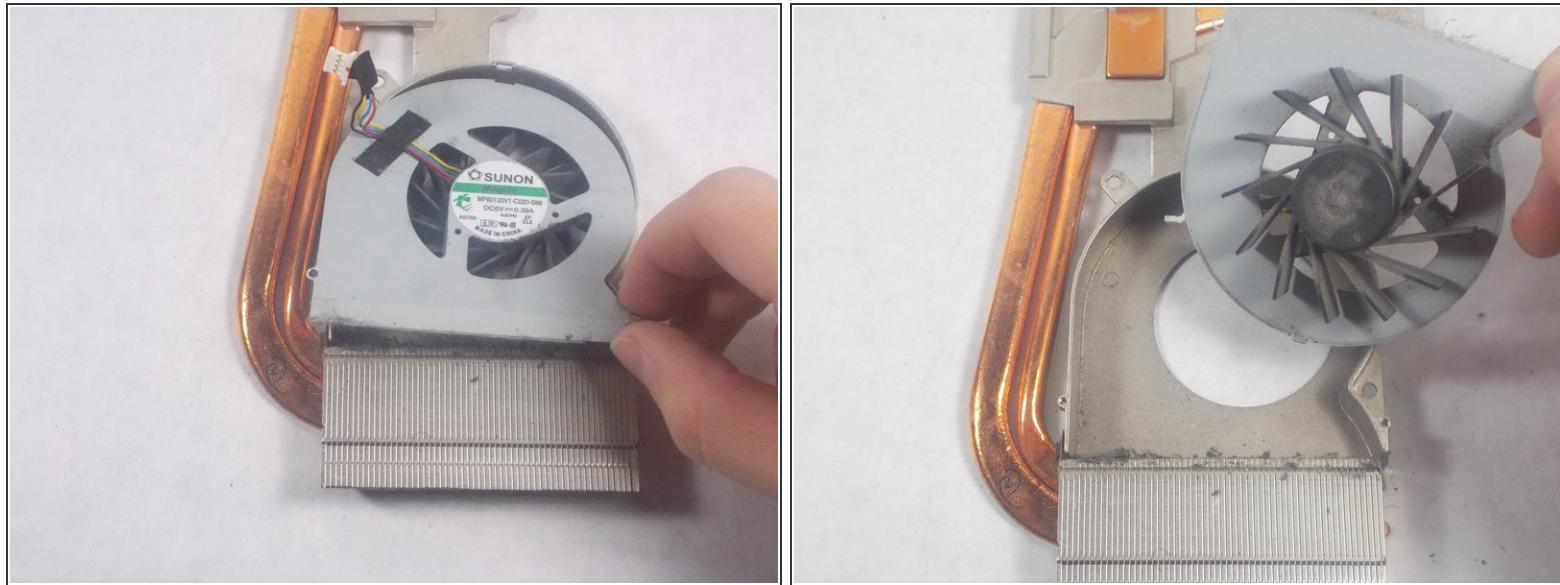
Step 35



- Remove (2) 2mm screws on the sides of the cooling fan with a #00 Phillips screwdriver.

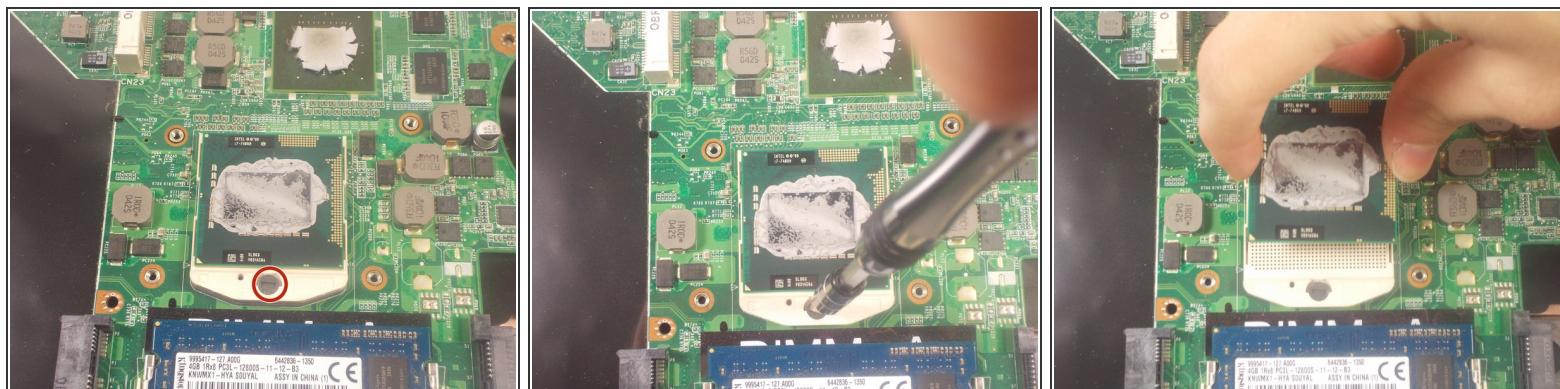
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Step 36



- Remove the cooling fan from the heat sink assembly by pulling it upward.

Step 37 — CPU



- Locate the CPU locking screw on the processor socket.
- Use a #4 Flathead screwdriver and turn the locking screw counter-clockwise until it stops.
- Lift the processor out of its socket carefully to avoid damaging the pins underneath.

⚠ Only handle the processor by the sides of the component to avoid contaminating or damaging it.

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

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