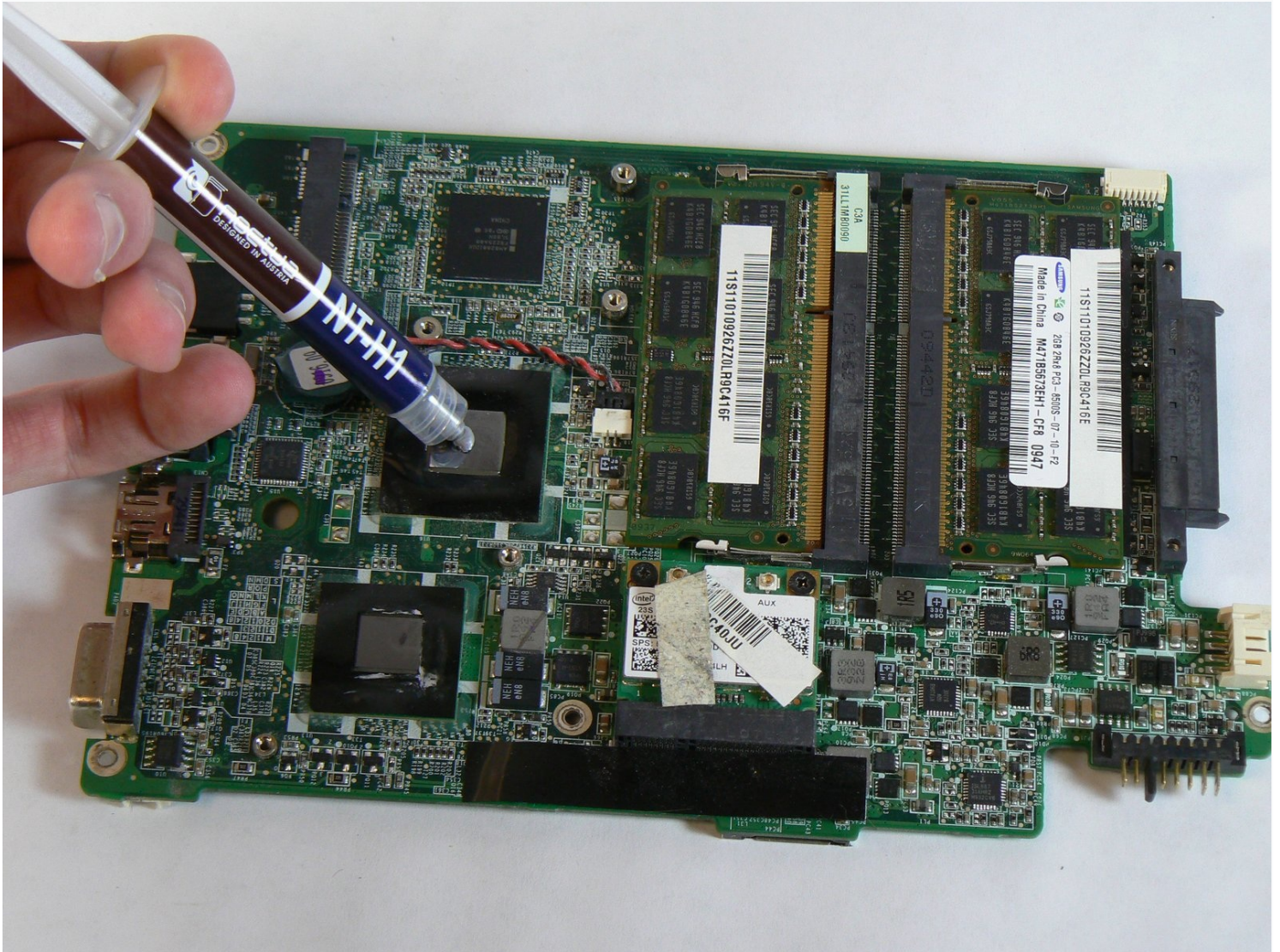




Lenovo IdeaPad U350 Thermal Paste Replacement

If your computer shuts down without warning...

Written By: Jason Sweeney



INTRODUCTION

If your computer shuts down without warning after prolonged use or during computationally intensive tasks, then the thermal paste may need to be replaced. The thermal paste is a thermally conductive paste that goes between the heat sink and the CPU. It transfers heat from the CPU to the heat sink, so that it can be expelled by the fan.

TOOLS:

Phillips #1 Screwdriver (1)
Spudger (1)
Phillips #0 Screwdriver (1)
Arctic Silver Thermal Paste (1)

PARTS:

Thermal Paste (1)

Step 1 — Battery



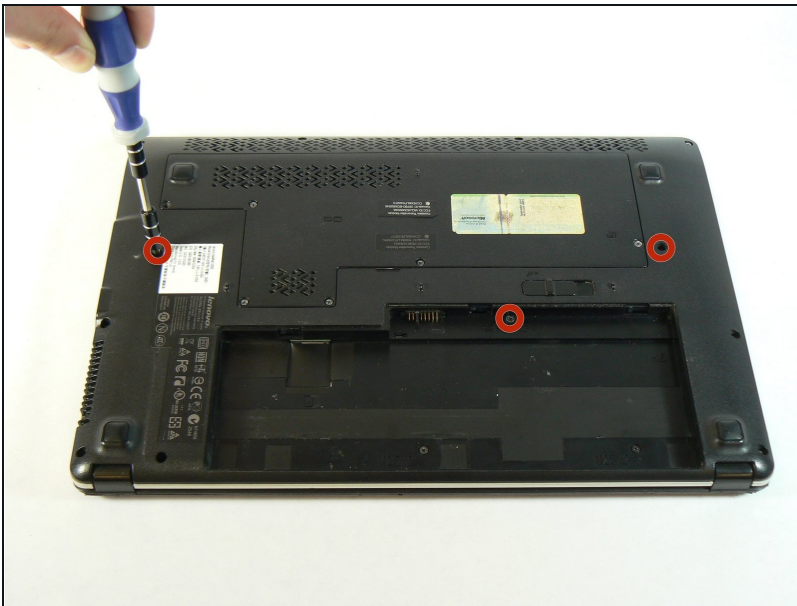
- Locate the battery by turning the laptop over.

Step 2



- Locate the lock switch and slide toward the outside edge of the laptop until it clicks into place and the battery unit pops up.
- Remove the battery unit from the laptop and set it aside.

Step 3 — Keyboard



- Unscrew the three screws on the bottom of the laptop that have small keyboard logos next to them using a PH1 screwdriver. These screws are 5.8mm long.

Step 4



- Flip the computer over and open the screen.
- Use a spudger to carefully press in the clip that is found here while prying the keyboard upward from the same side.

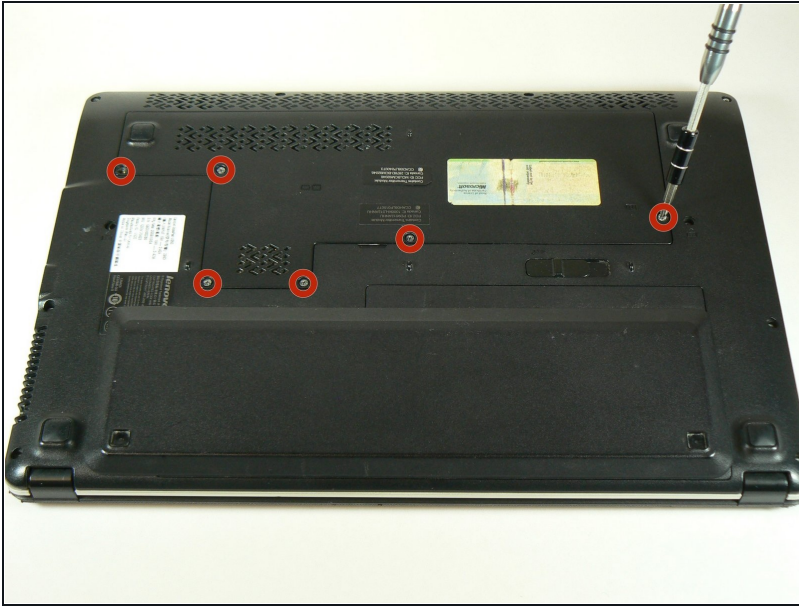
⚠ This clip is very stiff and also made of thin, brittle plastic. This means that it is easy to break off, which is what we did during our disassembly.

Step 5



- Slightly lift the bottom of the keyboard towards the screen to locate the keyboard's ribbon cable.
- Use the tip of the spudger to lift the black retaining flap on the ZIF connector.
- You should now be able to lift out the keyboard easily.

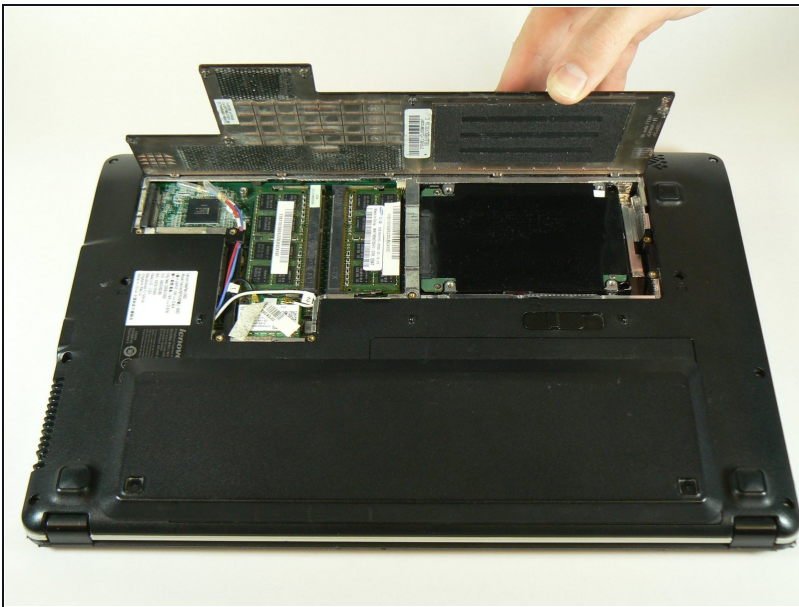
Step 6 — Hard Drive



- Unscrew the six screws on the back panel of the laptop using a PH1 Phillips bit.

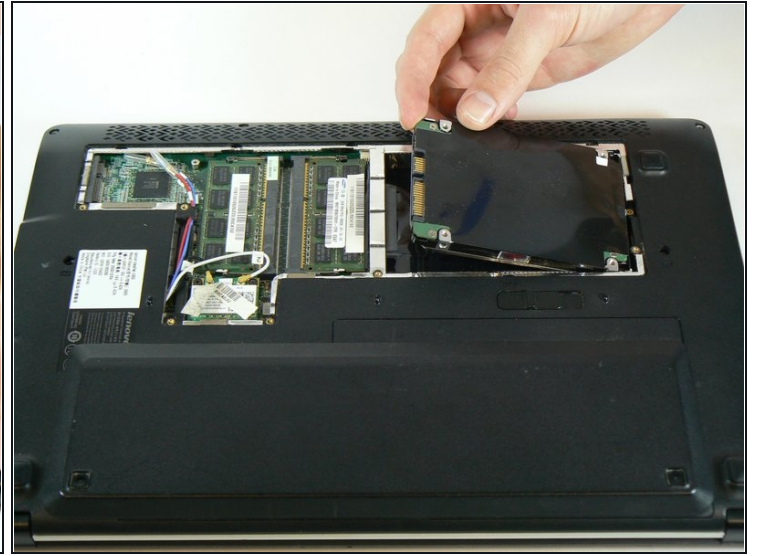
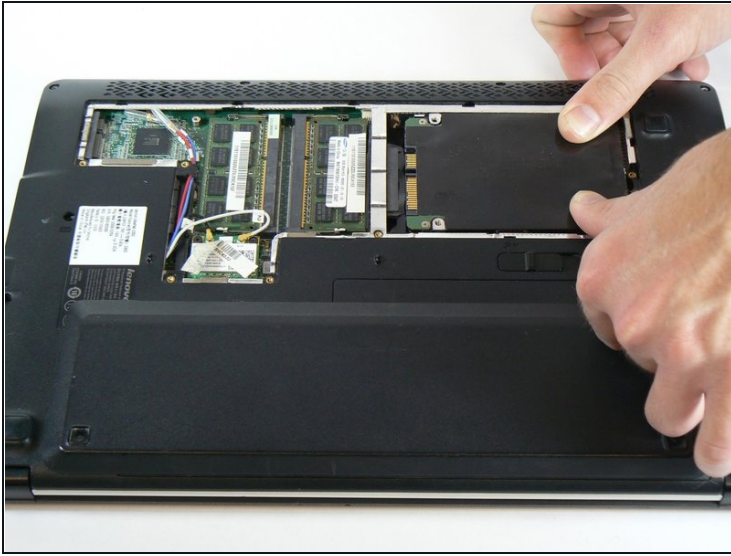
⚠ These screws are attached to the panel. When unscrewing, be sure to stop when you here a click.

Step 7



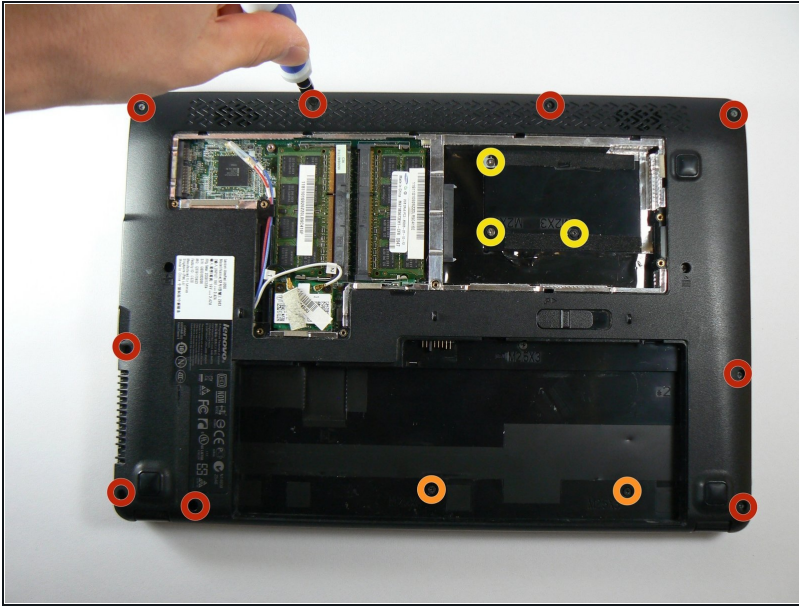
- Lift the back panel from the side closest to the battery and remove the panel.

Step 8



- Slide the hard drive to the right, away from the RAM modules.
- Lift the hard drive from the side closest to the RAM modules.
- ☑ When re-inserting the hard drive, ensure that the copper contacts on the drive's connector are facing upwards.

Step 9 — Remove the screws



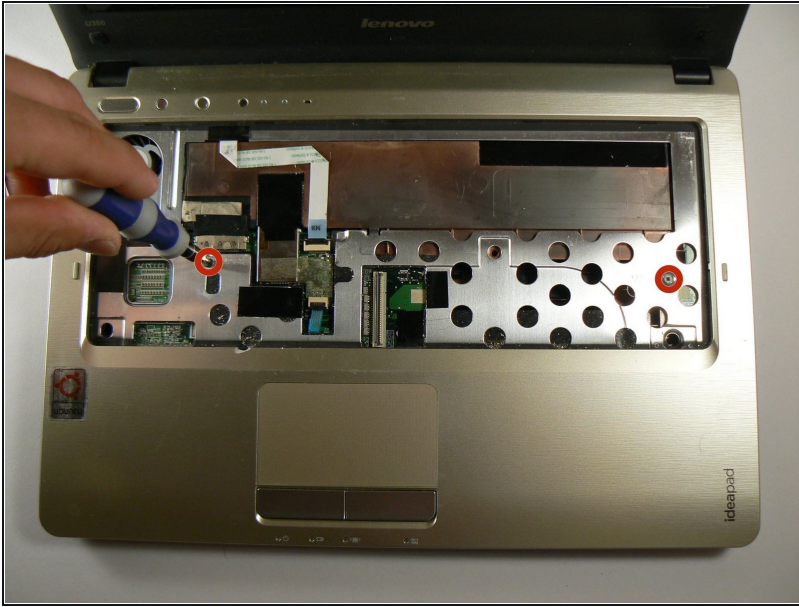
- Unscrew the nine screws that are around the edge of the laptop using a PH00 screwdriver. These screws are 5.7mm long.
- Unscrew the remaining two M2.5X3 screws that were under the battery using a PH1 screwdriver. These screws are 3.7mm long.
- Unscrew the three M2X3 screws that were under the hard drive using a PH1 screwdriver. These screws are 3.7mm long.

Step 10



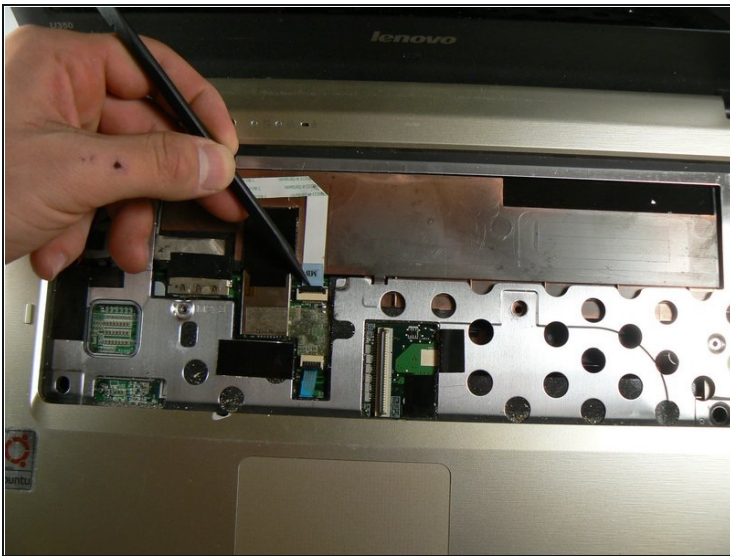
- Use the blue plastic opening tool to pry the silver plastic keyboard surround out from the black plastic bottom. You will need to do this around the entire perimeter of the laptop and will hear a pop every time one of the retention clips is unlatched.

Step 11



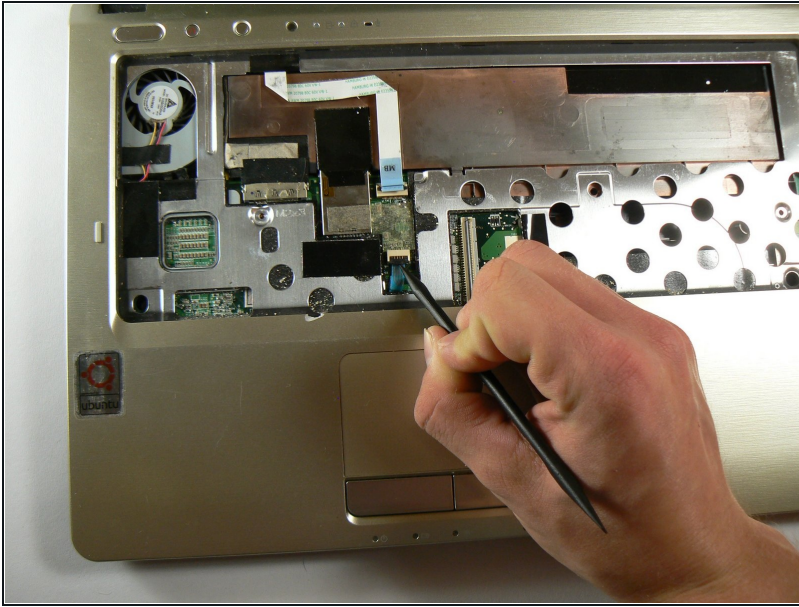
- Unscrew the two M2X3 screws that were under the keyboard.

Step 12



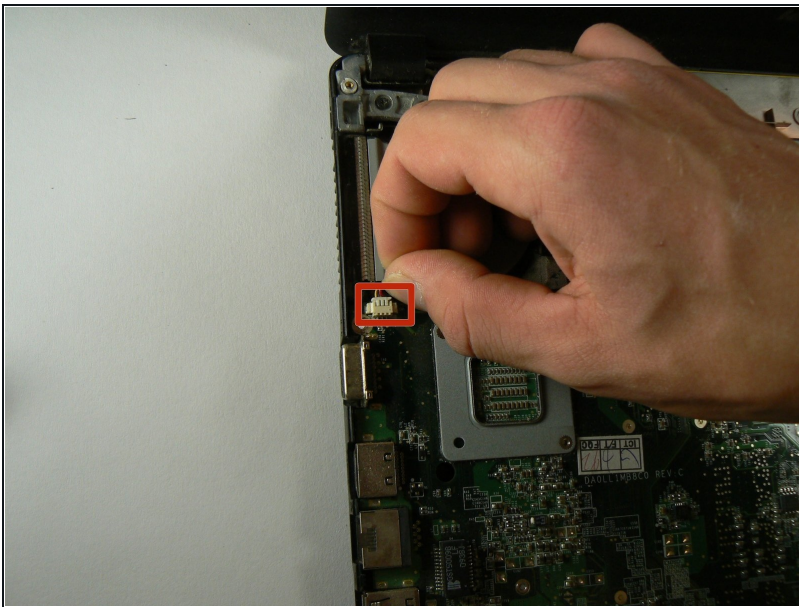
- Use the spudger to unlatch the retention clip on the power button and status LEDs ZIF connector.
- This ribbon cable is glued to the case. Carefully pull up on it from the right side until it is no longer sticking to the case.

Step 13



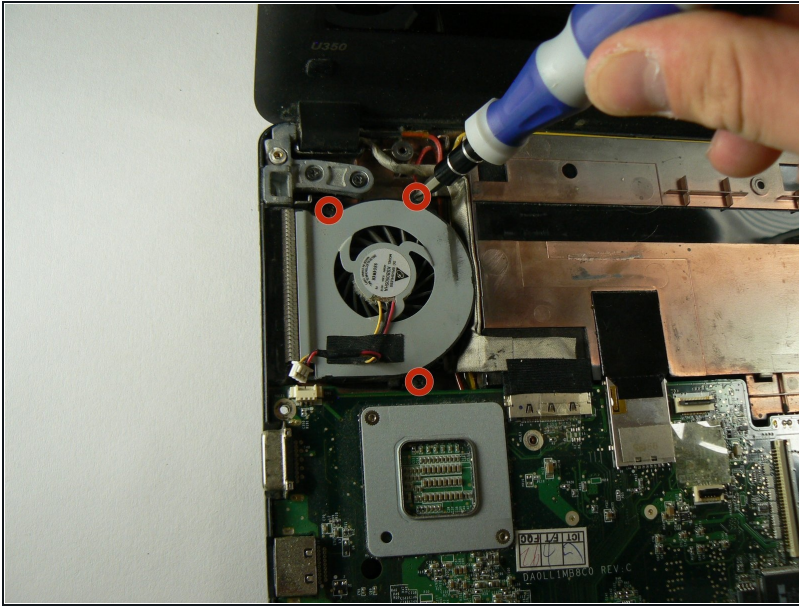
- Use the spudger to unlatch the retention clip on the touchpad ZIF connector.
- Lift the silver plastic keyboard surround away from the base of the laptop. There shouldn't be any resistance.

Step 14



- Unplug the fan wire from the motherboard.

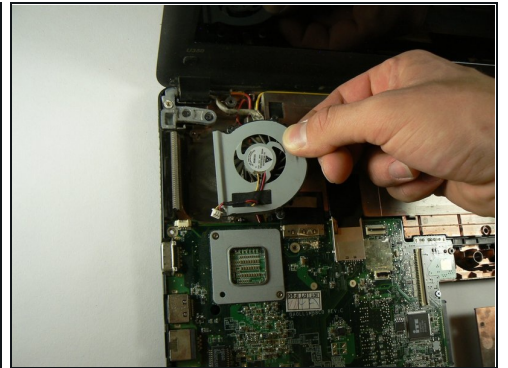
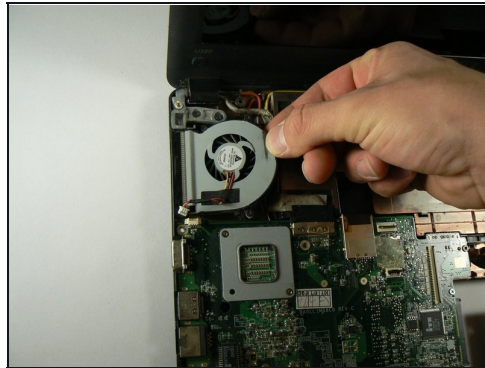
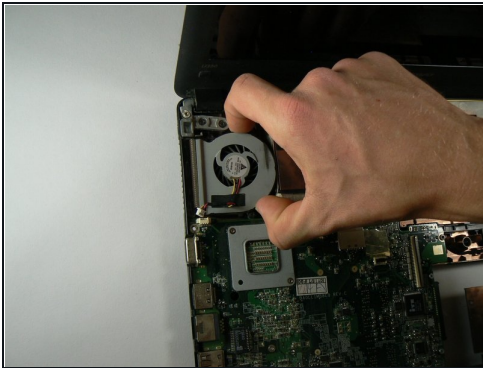
Step 15



- Unscrew the three fan screws using a PH1 bit.

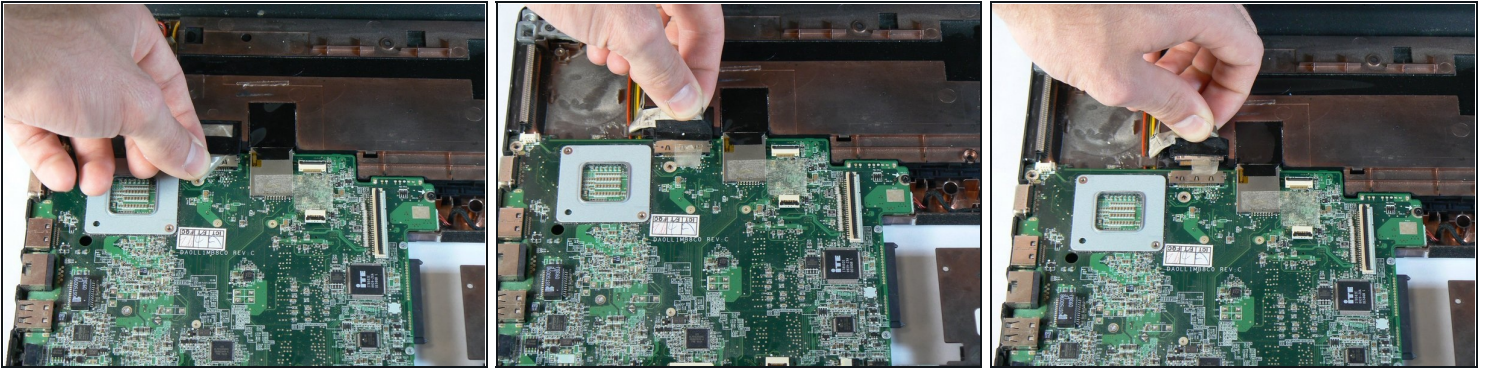
⚠ These screws are attached to the fan. When unscrewing, be sure to stop when you hear a click.

Step 16



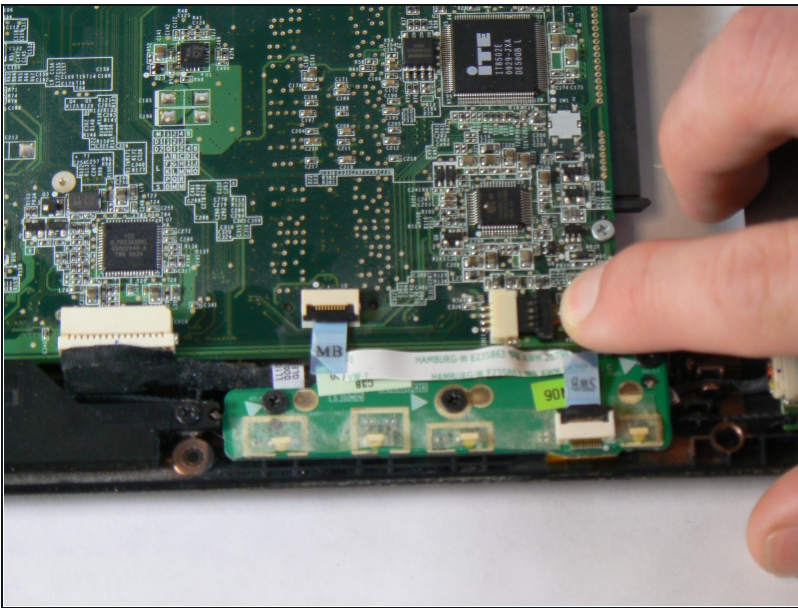
- Grip the fan from as far to the right (towards the center of the laptop) as possible and lift up.
- As soon as the right side of the fan clears the bump in the case where the battery is housed, pull the fan to the right. This should dislodge it from the heatsink.

Step 17 — Thermal Paste



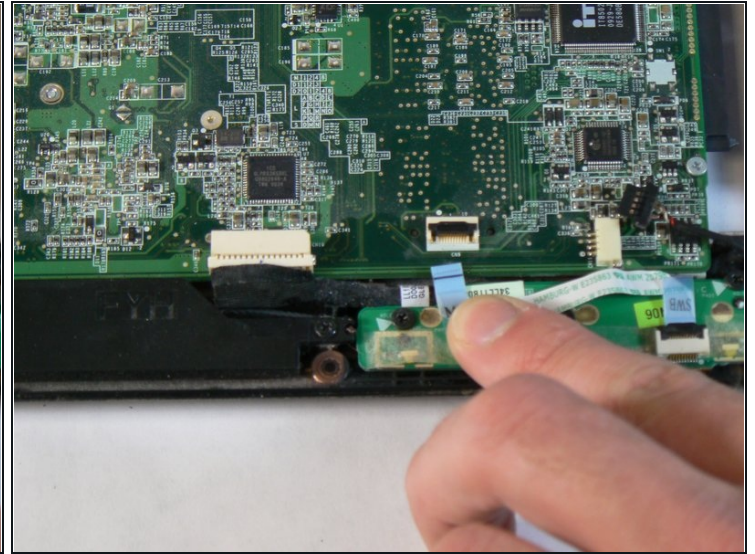
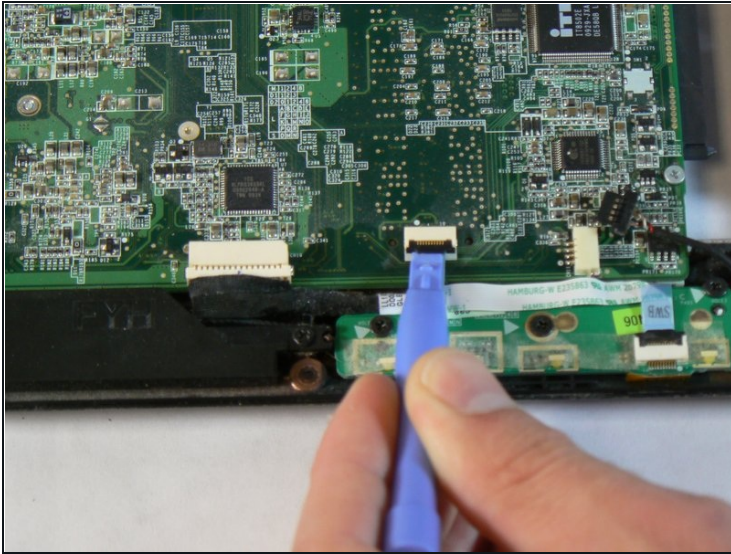
- Carefully pull the glued plastic tab on the display connector away from the motherboard.
- Pull the display cable itself out of the connector.

Step 18



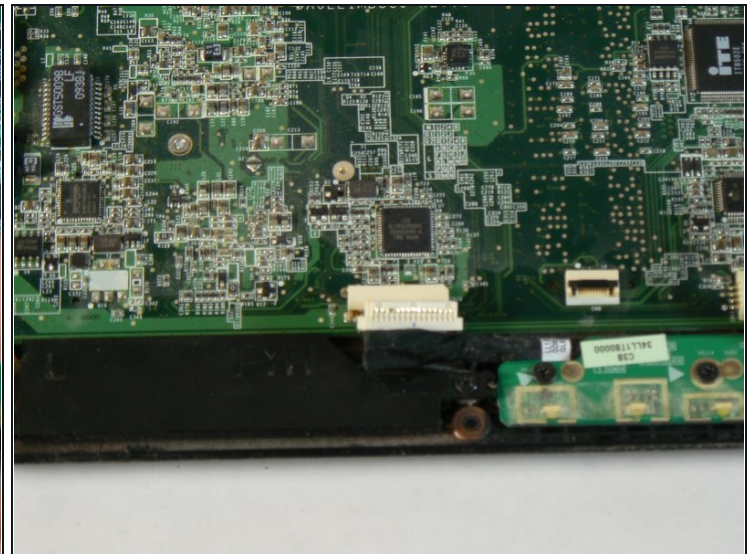
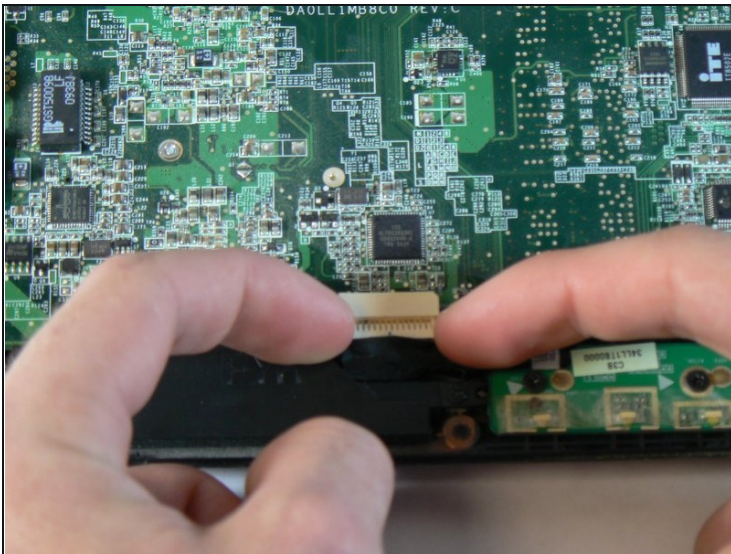
- Unplug the speaker wire from the motherboard.

Step 19



- Use the blue opening tool or spudger to unlatch the indicator LED board ZIF connector.
- Pull the indicator LED board ribbon cable out of the connector.

Step 20



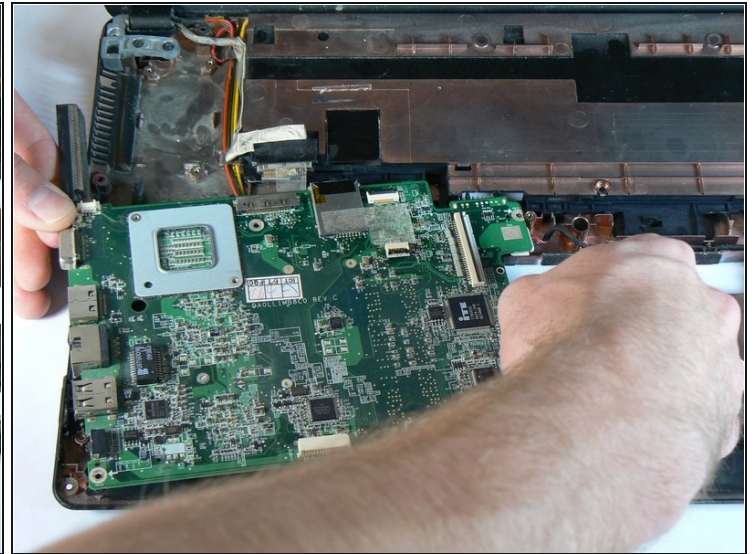
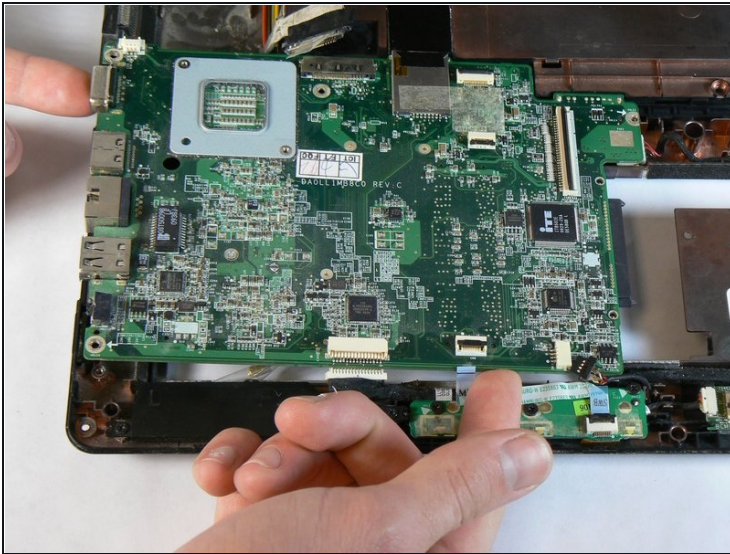
- Unplug the I/O daughterboard cable from the motherboard.

Step 21



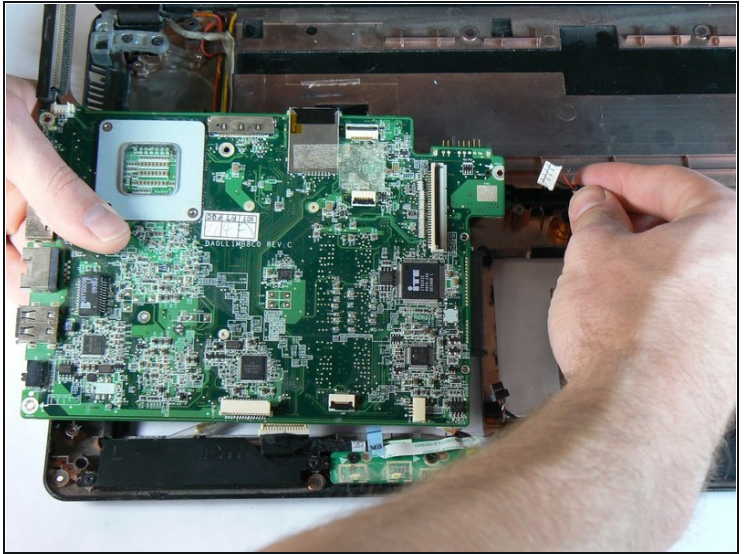
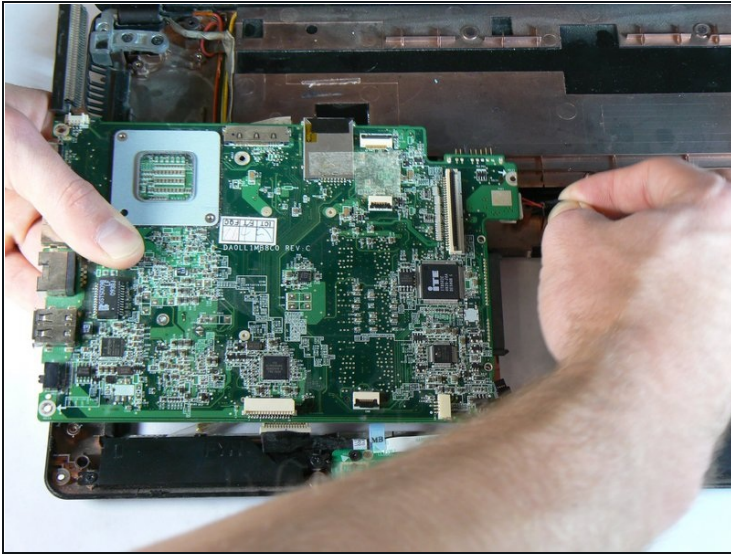
- Unscrew the four remaining screws that are holding the motherboard in place using a PH1 bit. The silver screws are 5.6mm long and the black screws are 3.6mm long.

Step 22



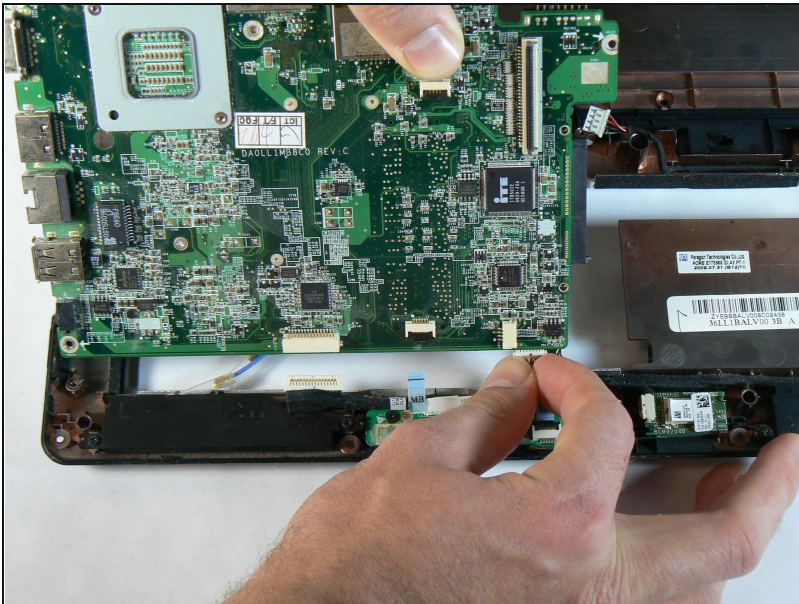
- Begin lifting the motherboard out from the top left and bottom right corners.
- The battery terminal on the top right corner of the motherboard will likely be lodged in the hole leading to the battery compartment. Some wiggling may be necessary in order to free it.

Step 23



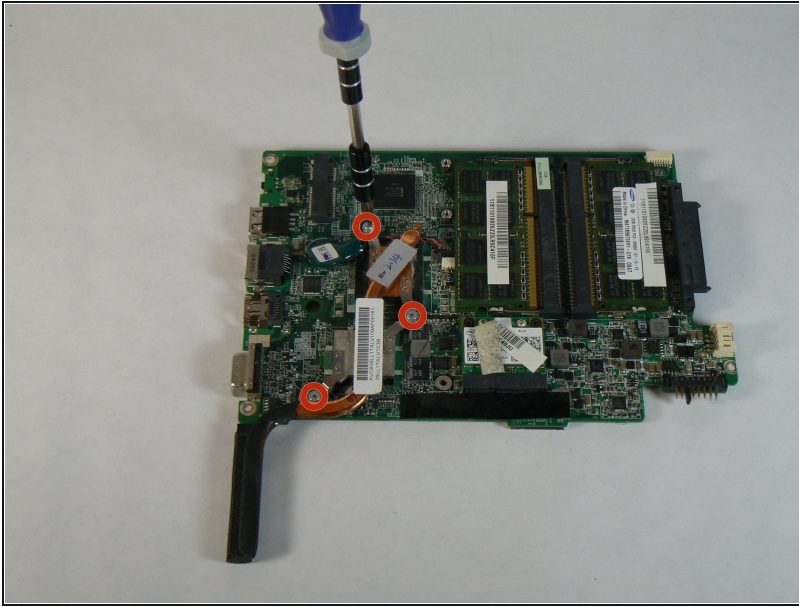
- Unplug the power port cable from the motherboard.

Step 24



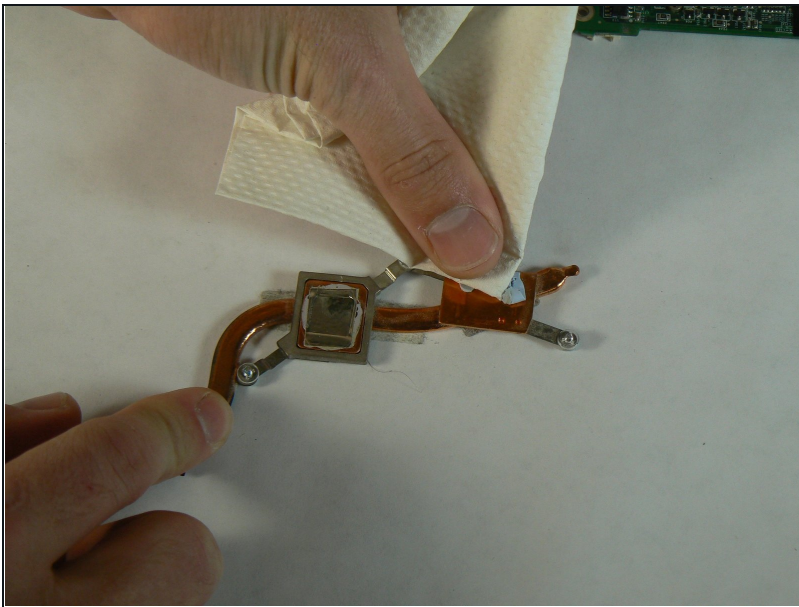
- Disconnect the remaining cable on the bottom right corner of the motherboard.

Step 25



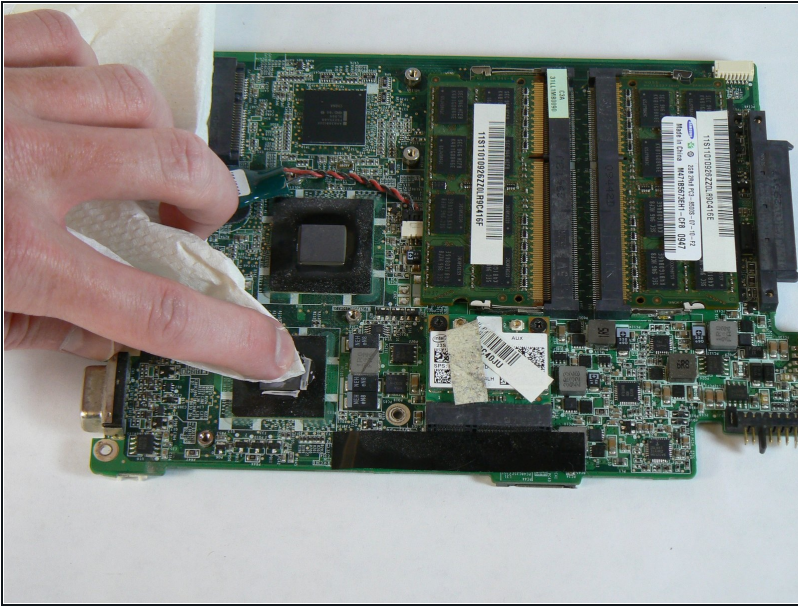
- Unscrew the three heatsink screws using a PH1 bit. These screws are attached to heatsink assembly.

Step 26



- Clean off the old thermal paste from the bottom of the heatsink. Using rubbing alcohol can make the process easier.

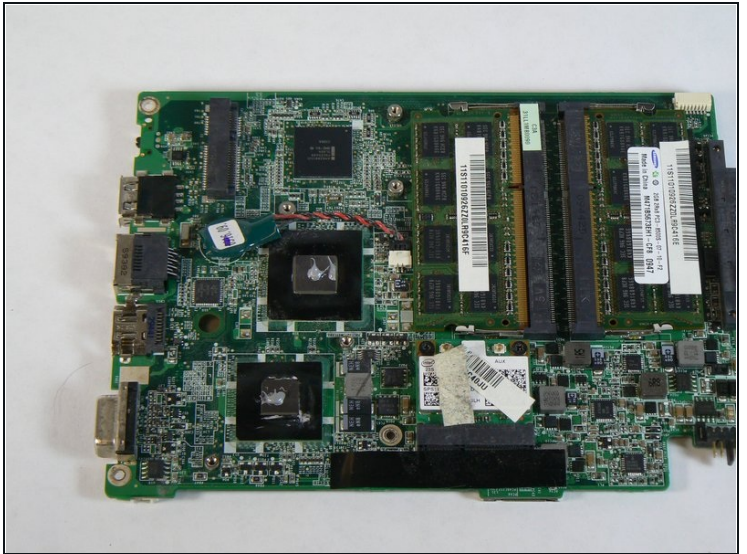
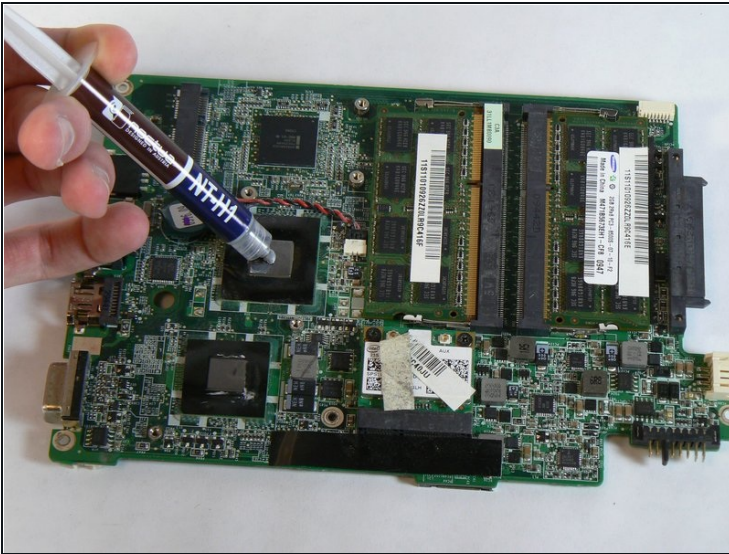
Step 27



- Clean the old thermal paste off of the CPU and Northbridge dies on the motherboard.

⚠ Never use any object harder than soft plastic for scraping off tough thermal paste. Doing so can scratch the dies or traces, leaving the processor inoperable.

Step 28



- Apply new, high-quality thermal paste to both dies. Noctua NT-H1 or Arctic Silver 5 are recommended. Only a small bead of thermal paste, roughly the size of a grain of rice, is necessary.

Step 29



- Carefully place the heatsink back on the dies, attempting to keep it level in order to create an even spread of thermal paste.
- Tighten all of the heatsink assembly screws.

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