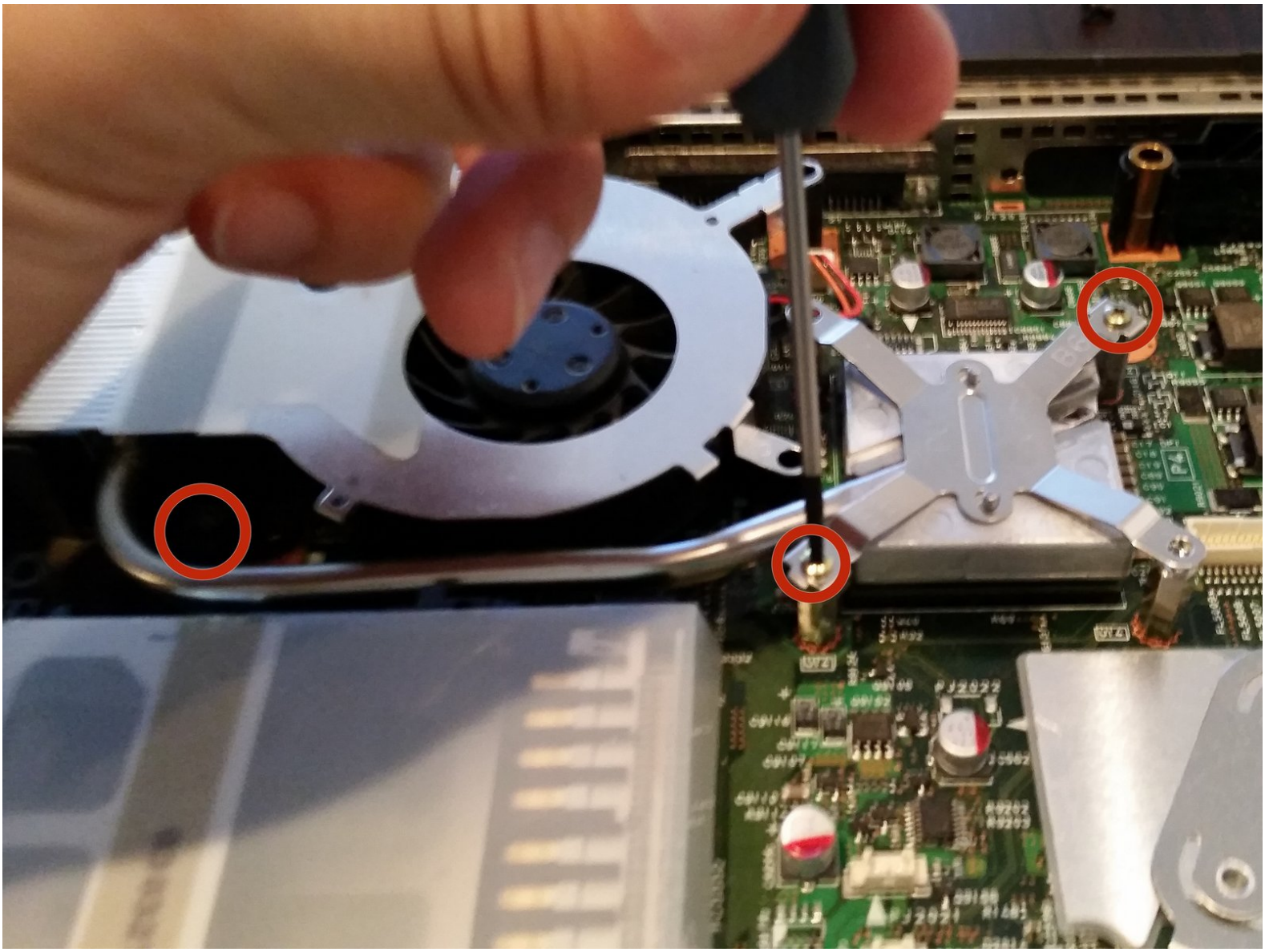
Toshiba Satellite 1415-S105 CPU Fan and Heatsink Replacement

Replacement instructions for the Toshiba Satellite 1451 CPU fan and heatsink.

Written By: Kiril Lange



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INTRODUCTION

An overheating laptop, or an always on noisy fan, can be caused by a clogged heatsink, clogged fan, broken fan, or bad thermal paste.

This procedure is similar to the Satellite 1410.

TOOLS:

- Phillips #0 Screwdriver (1)
- iFixit Opening Tools (1)
- Q-Tips (5)
- Isopropyl Alcohol (1)

PARTS:

- Arctic Silver Thermal Paste (1)

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Step 1 — Battery

- The battery is located on the front right corner of the laptop.

Step 2

- With one finger on the raised grip, slide the latch towards the front of the laptop.

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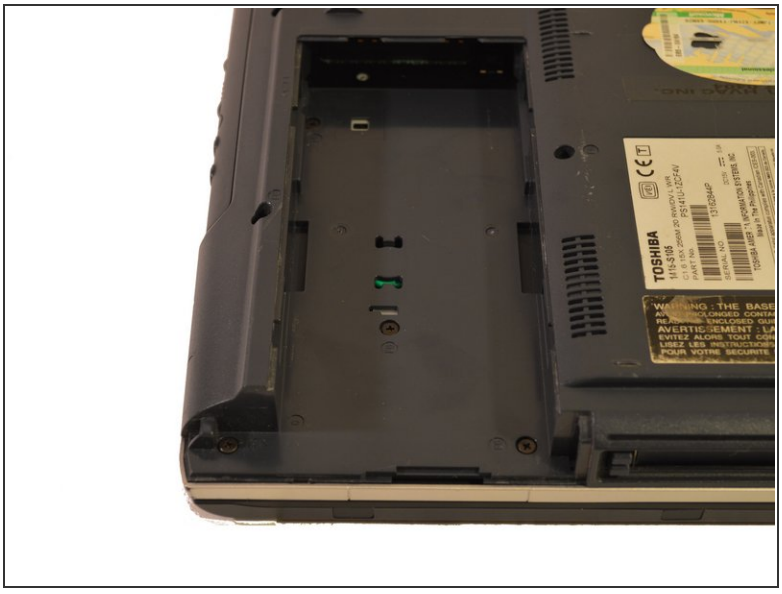
Step 3

- Pull the battery out towards the side.

Step 4



- Lift the battery straight up, out of the computer.

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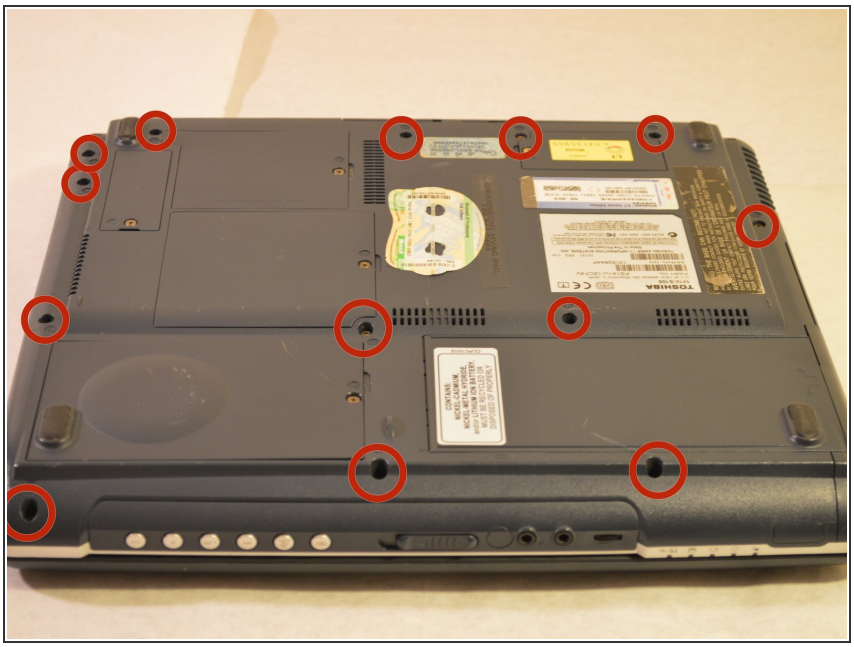
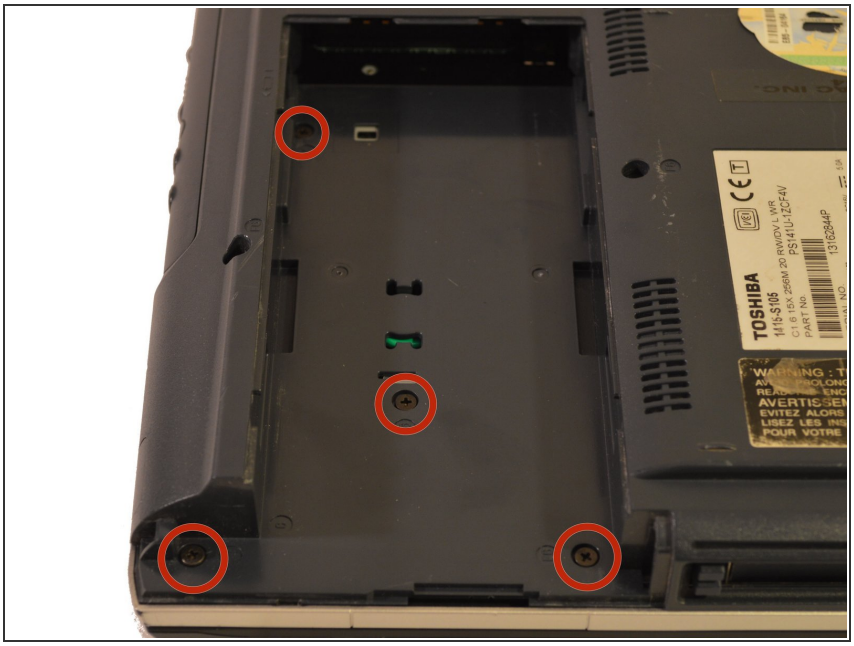
Step 5 — Lower Case



- Unscrew all of the visible screws on the bottom of the laptop.
- The screws circled are not necessary to remove.
- Keeping track of which hole each screw goes in will speed up reassembly.

Step 6



- Unscrew the screws located beneath the battery.

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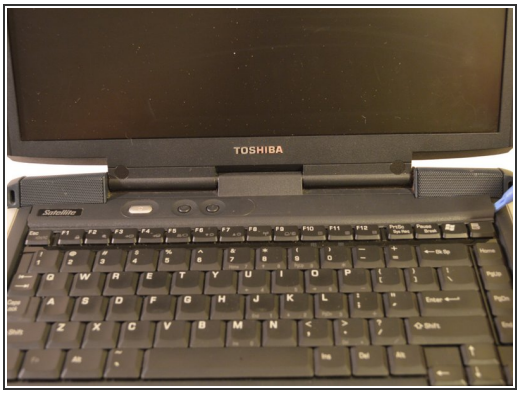
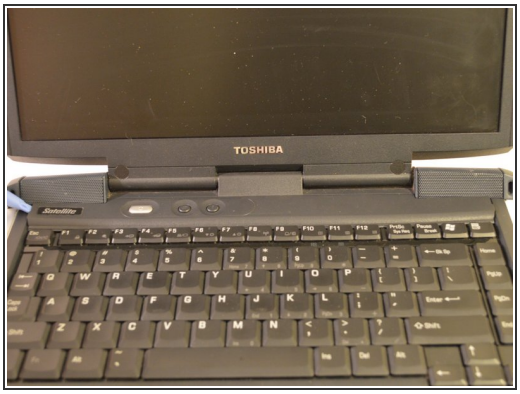
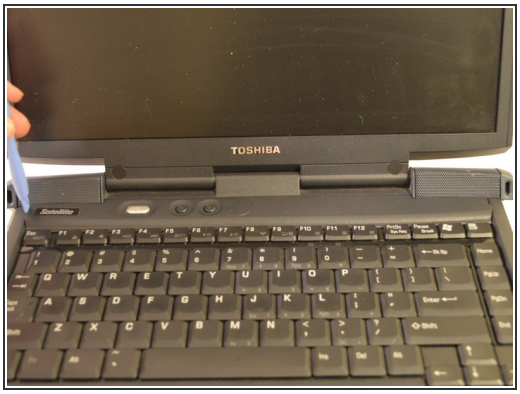
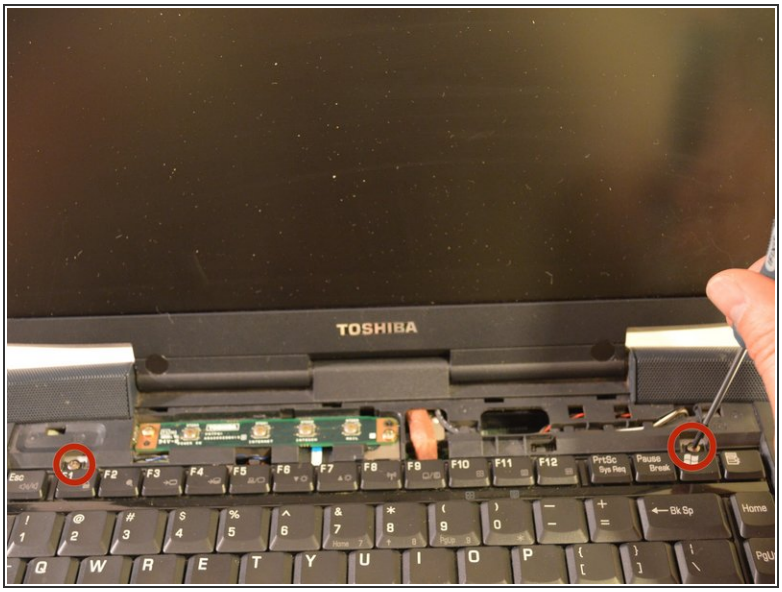
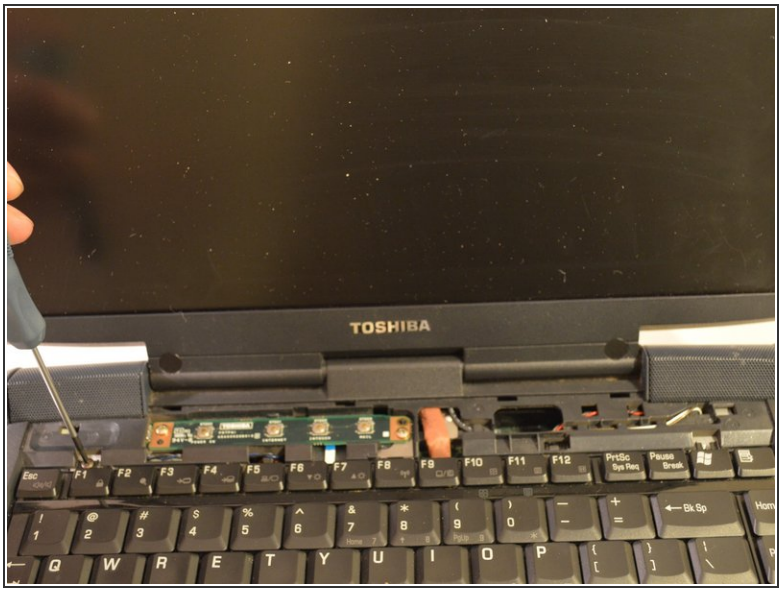
Step 7 — Keyboard

- Using a set of case opening tools, pry open the left and right sides of the black plastic strip above the keyboard.
- Fully detach the strip.

Step 8

- Unscrew the two screws near the top of the keyboard.

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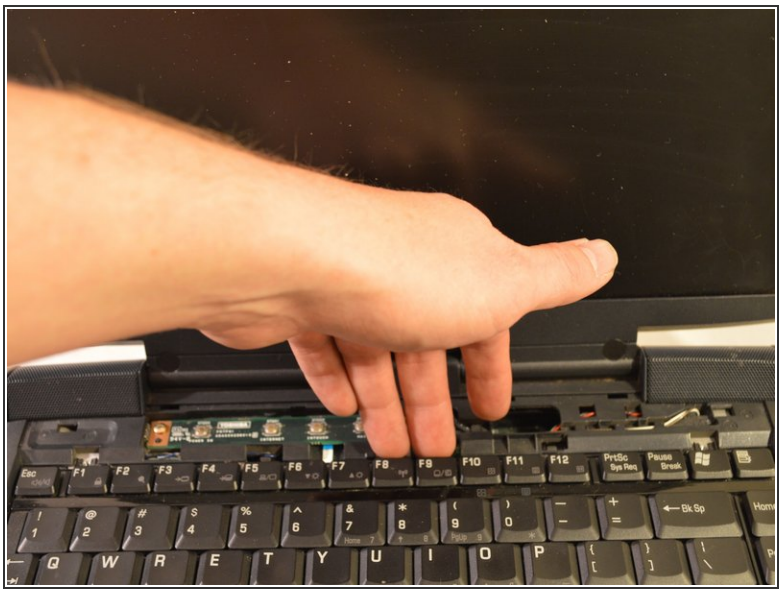
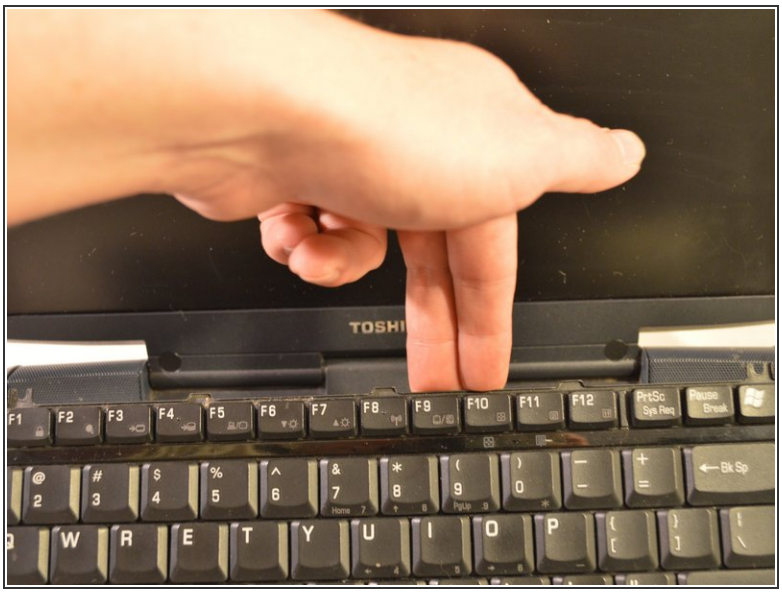
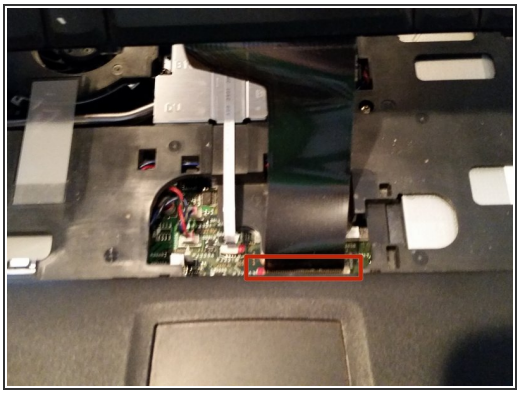
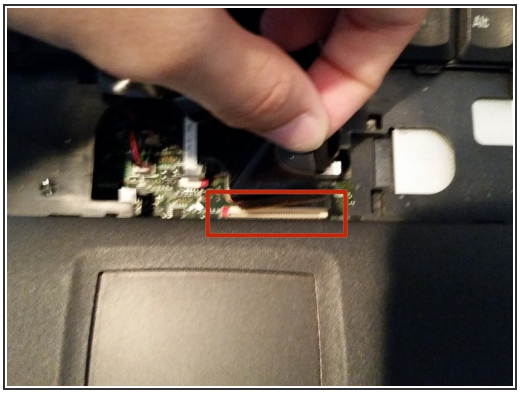
Step 9

- Lift the keyboard by holding the middle top of the keyboard.

⚠ The keyboard is still connected by a ribbon cable to the motherboard.

Step 10

- Carefully pull upwards on the ribbon cable to detach.
- Remove keyboard.

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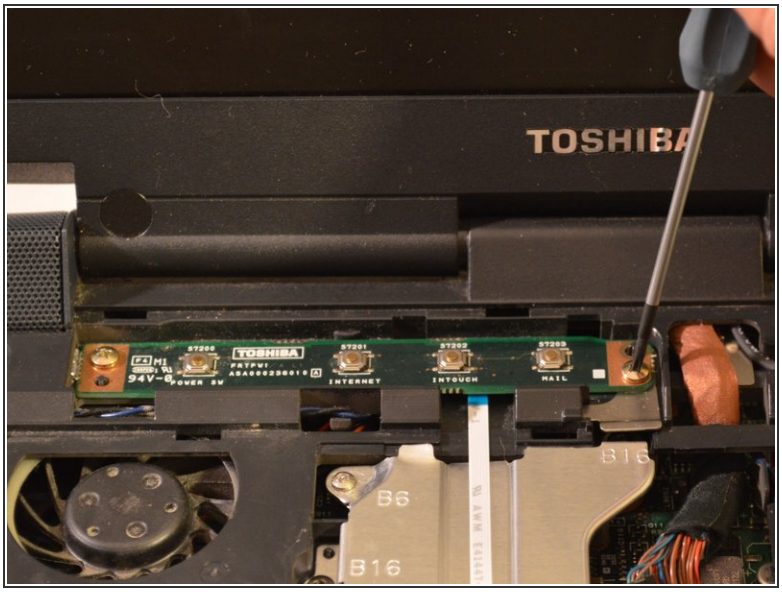
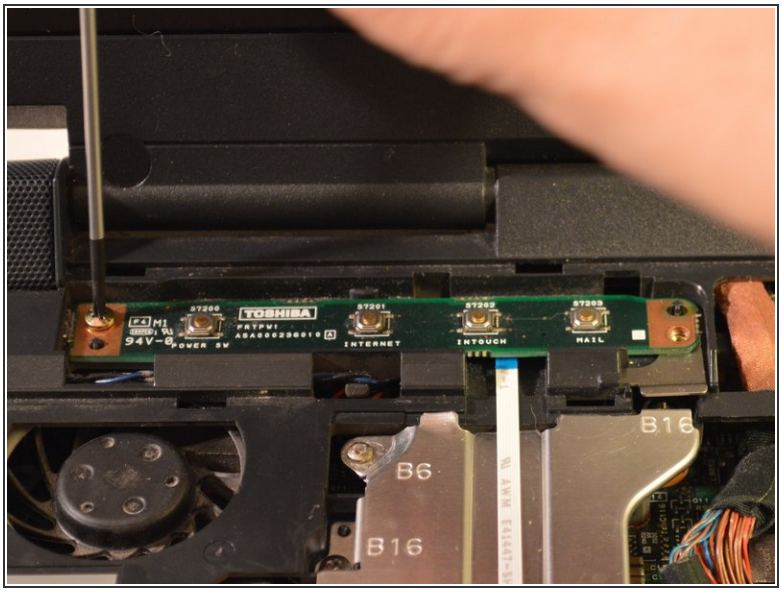
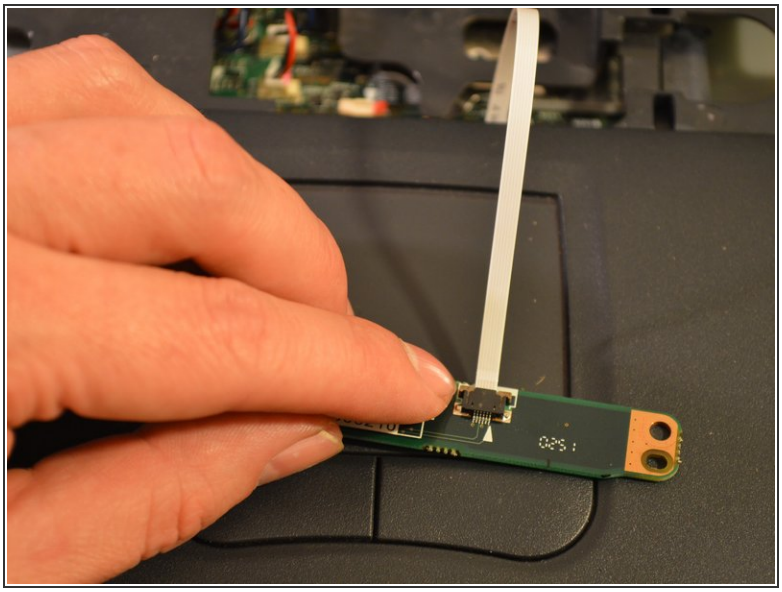
Step 11 — Power Button Circuit Board

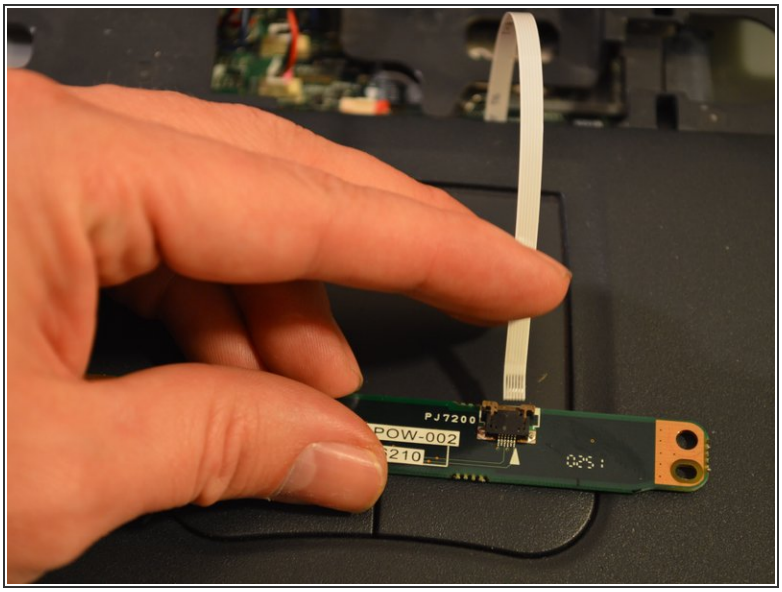




- Unscrew the screws on either side of the power button circuit board.

Step 12





- Pull upward on the small white ribbon cable to detach from circuit board.

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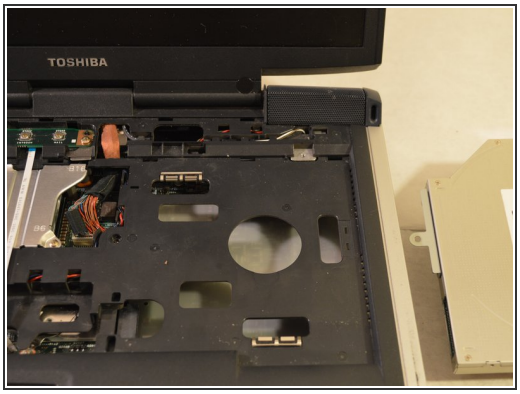
Step 13 — Optical Drive

- Unscrew the screw located on the left side of the optical drive near the heat sink cover in the middle of the laptop.

Step 14



- Using spudger, push the optical drive out to the right.

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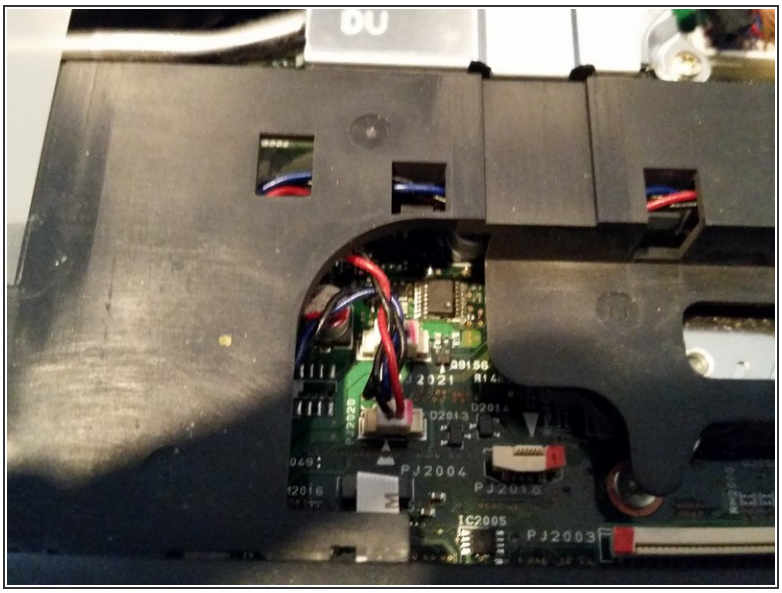
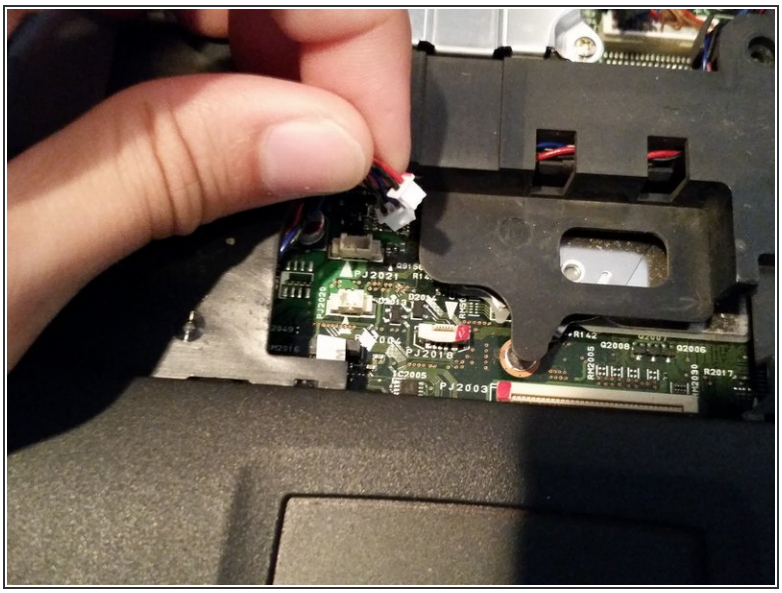
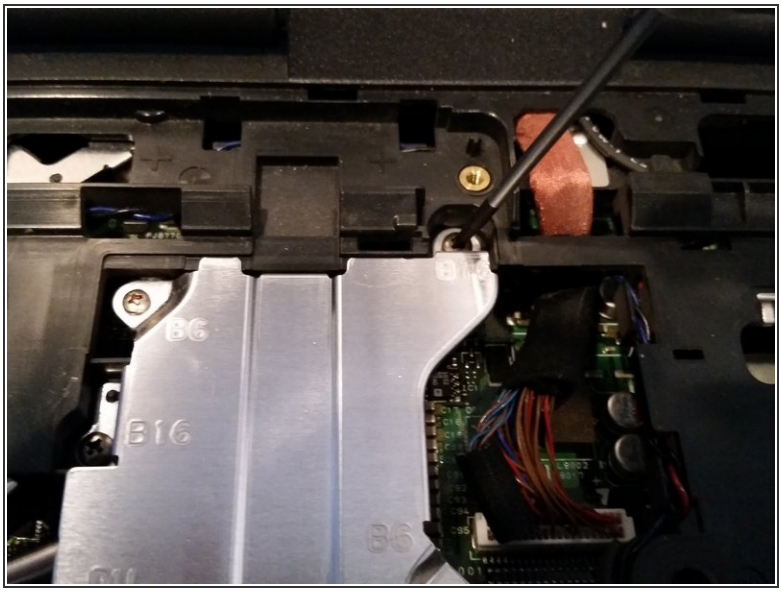
Step 15 — Upper Case

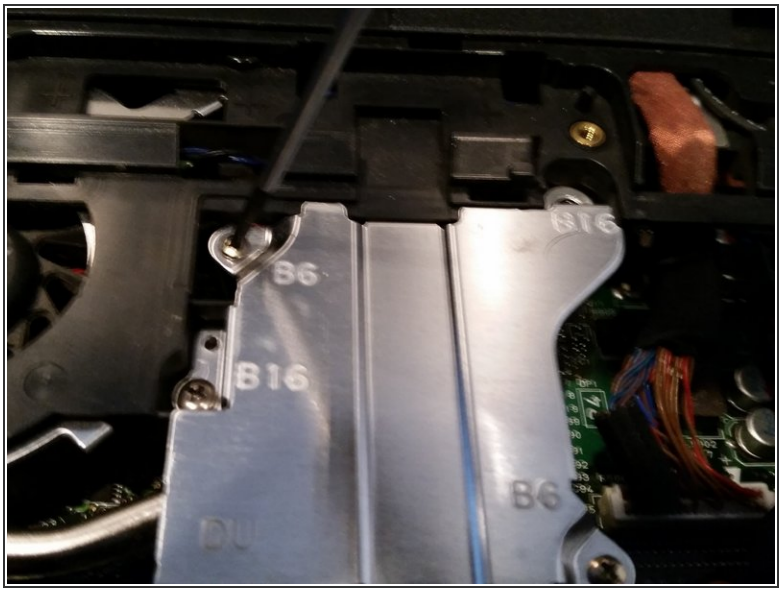




- Disconnect both speaker connectors located near the center of the laptop.

Step 16





- Unscrew all visible screws on the heat sink shield.

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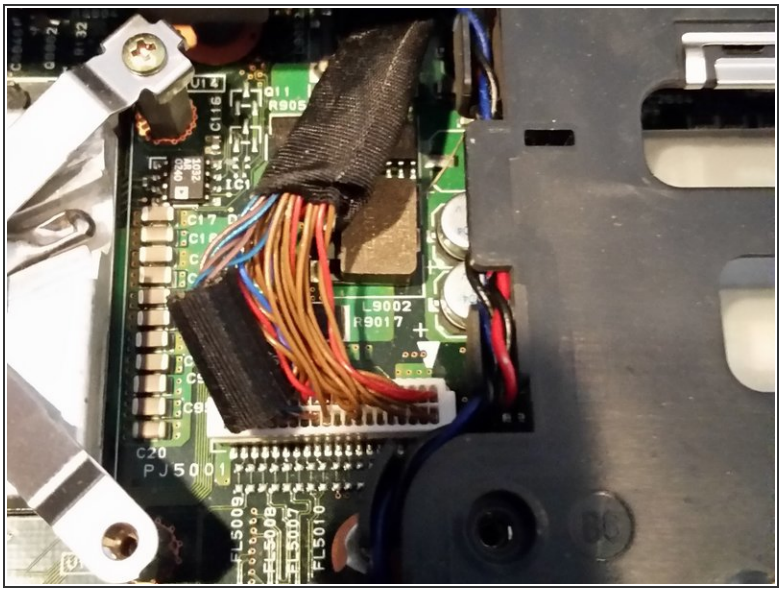
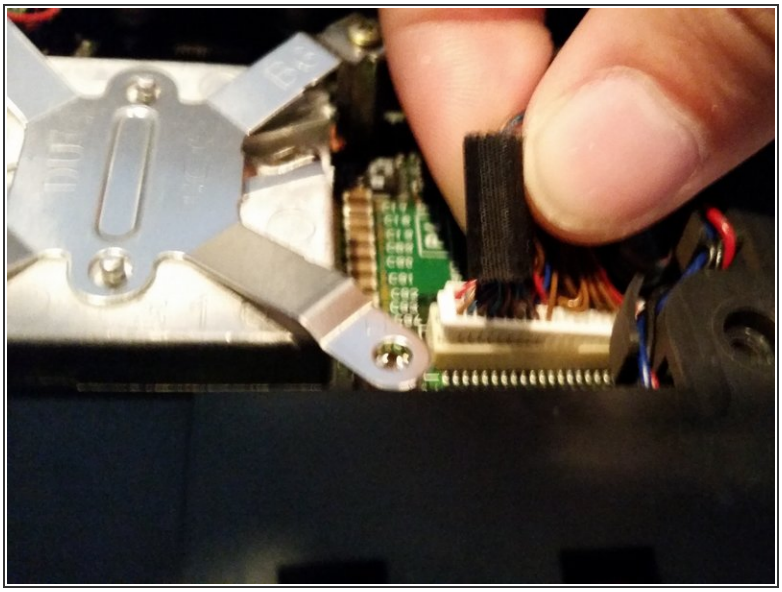
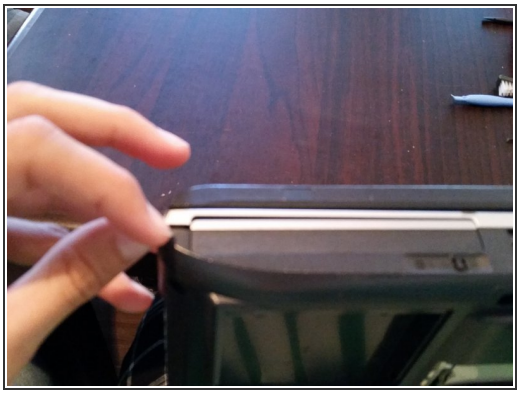
Step 17





- Disconnect the monitor connector.

Step 18



- Starting from the front right corner pry apart the black bottom from the gray top.

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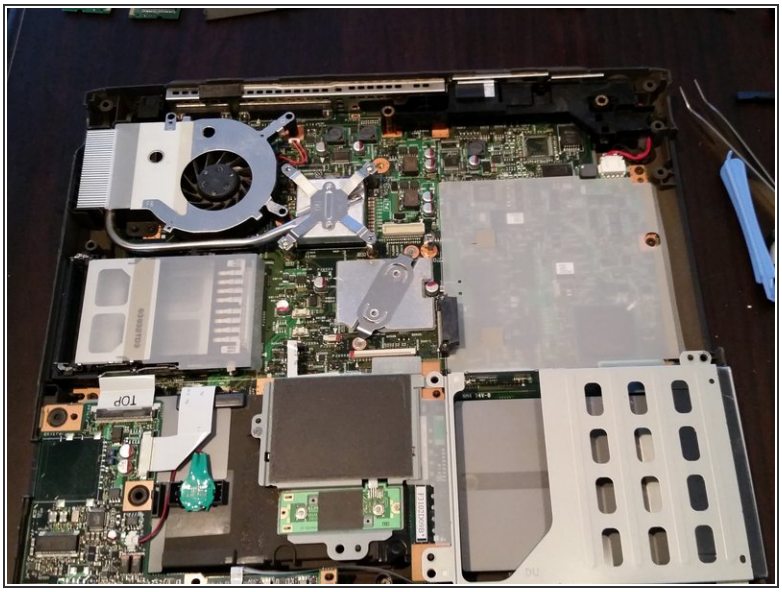
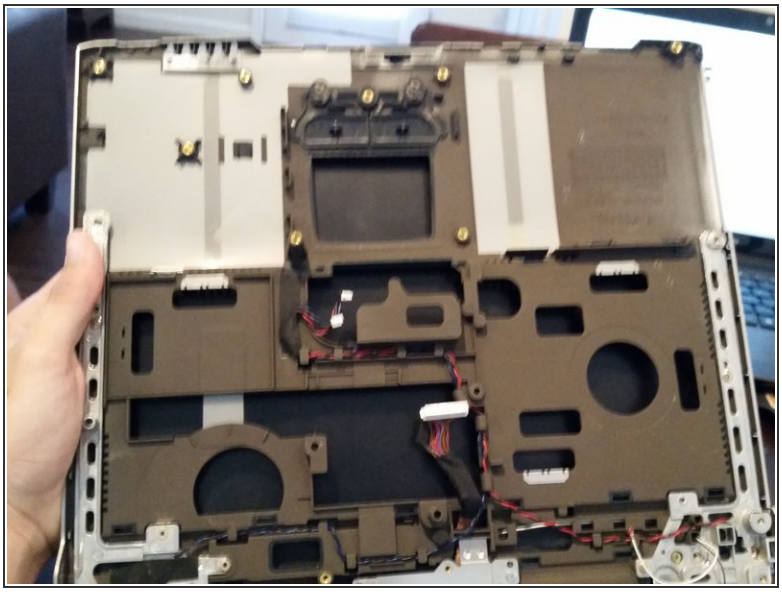
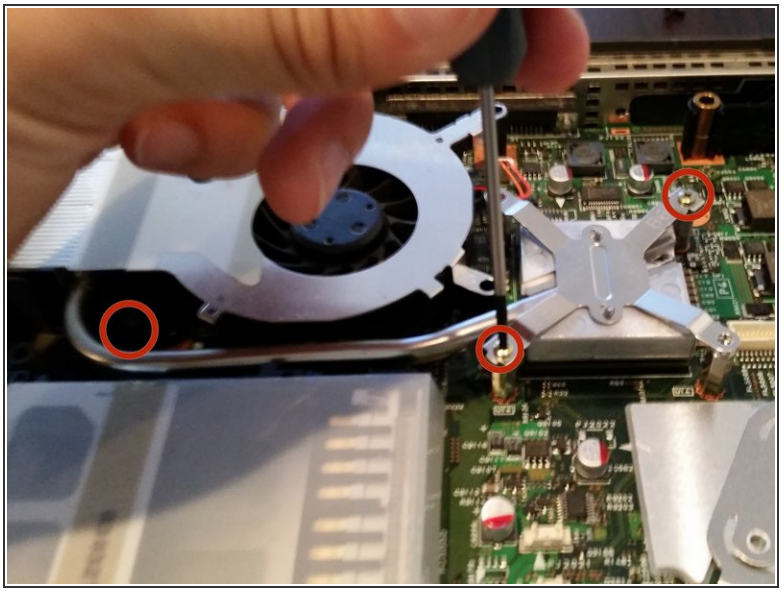
Step 19





- Set aside the top half.

Step 20 — CPU Fan and Heatsink



- Unscrew the remaining screws on the heatsink and fan brackets.

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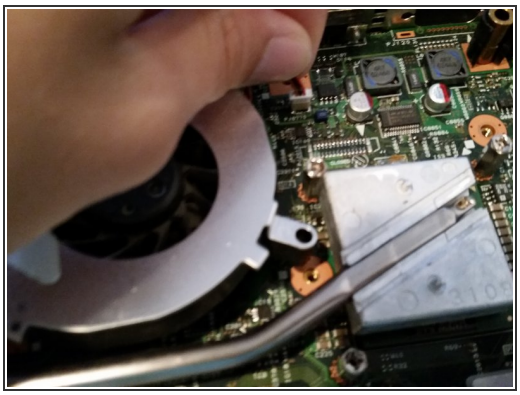
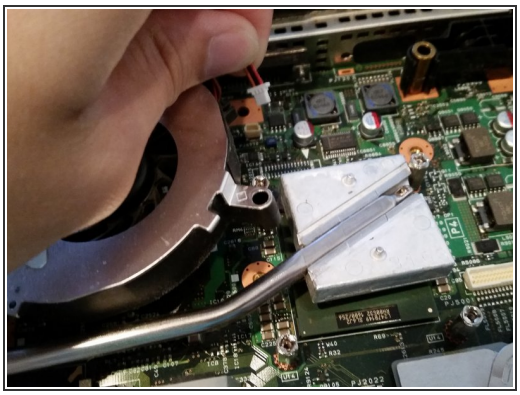
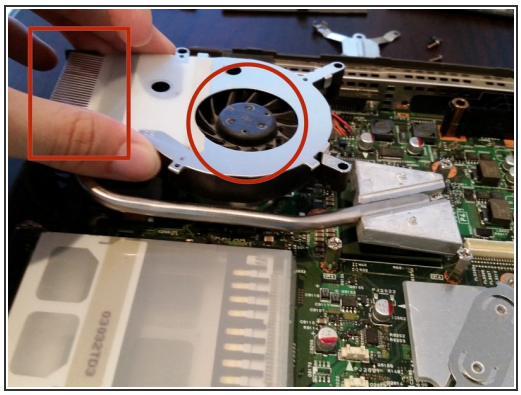
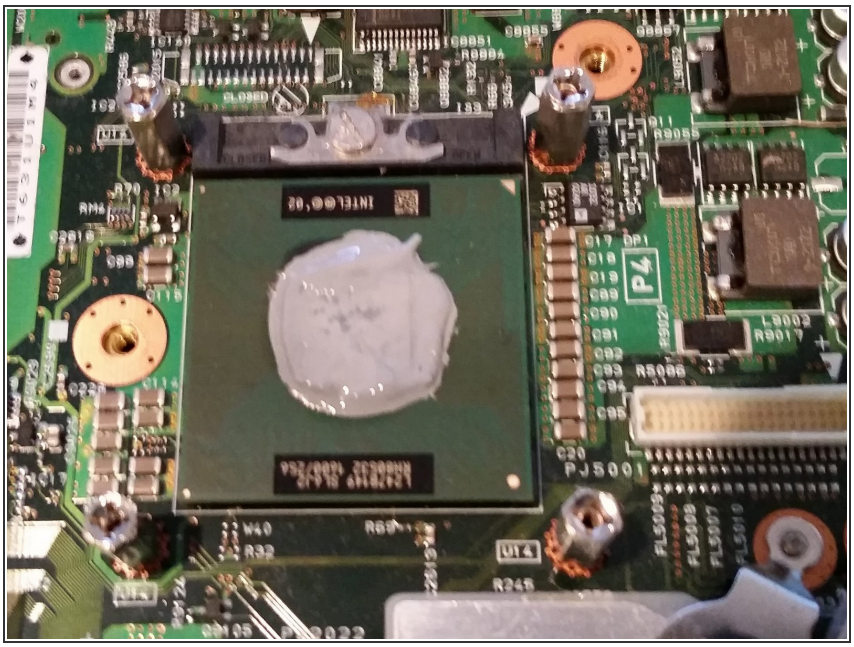
Step 21

- Disconnect the fan power connector.
- Remove the heatsink and fan.
- Check the heatsink fins and fan for any dust build-up. If any is found use compressed air to clean.

Step 22



- Clean the old thermal paste off the CPU and heatsink.
  - Use a q tip to remove the majority of the thermal paste.
  - Use an isopropyl alcohol soaked q tip to further clean remaining thermal paste.
  - Dry and clean both surfaces with another q-tip.
- Once completely clean, apply a rice grain sized amount of new thermal paste to the CPU and reattach the heatsink and fan.

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

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