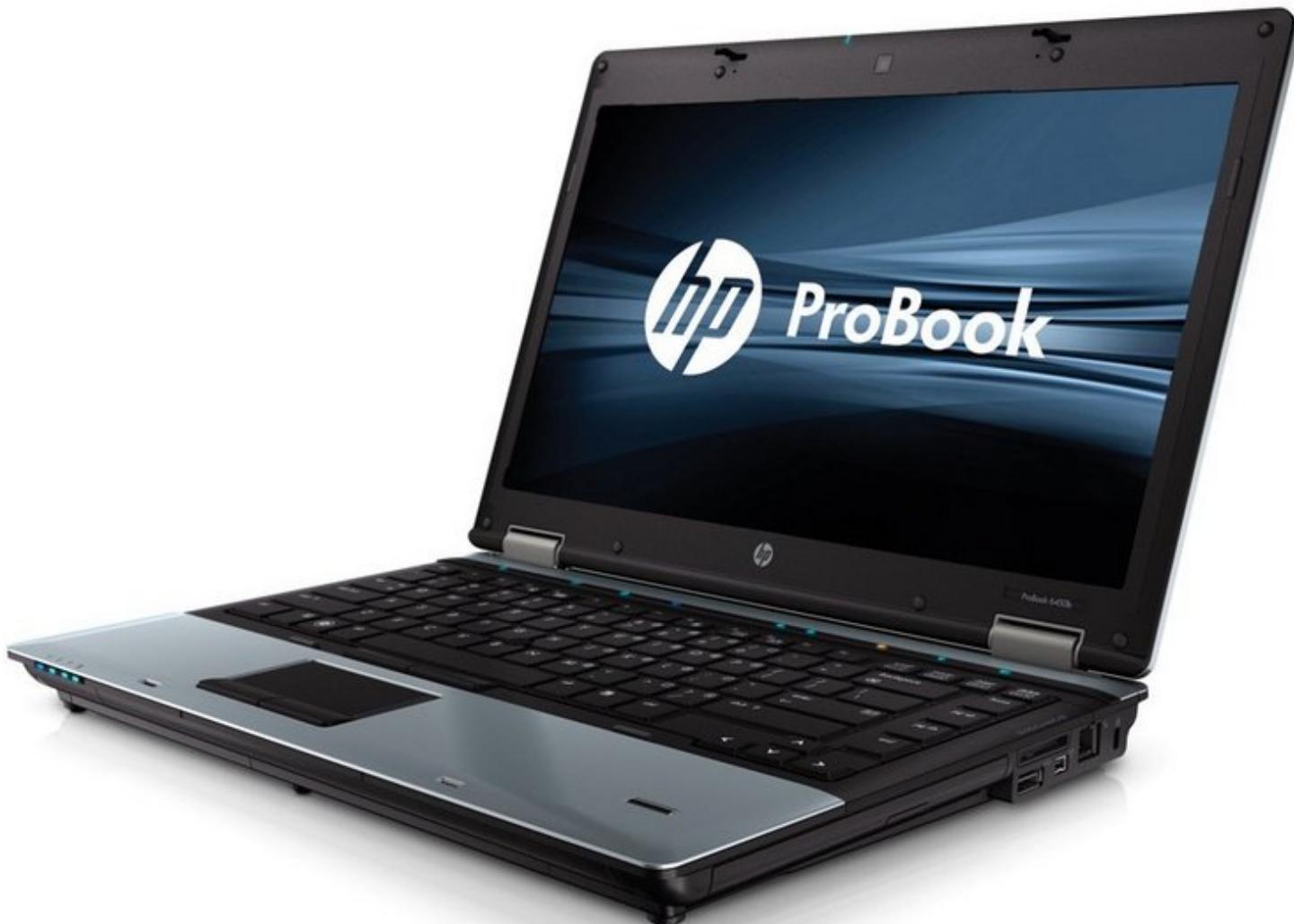




HP Probook 6450b Fan Cleaning & Thermal Paste Replacement

This guide will show you how to clean the vent fan and replace the thermal paste for the heat sink in your HP Probook 6450b.

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INTRODUCTION

Is your laptop constantly overheating and shutting off? This could be due to a clogged vent fan and/or burnt out thermal paste on your heat sink. Thermal paste is a conductive paste that allows heat to transfer from the electrical components in your laptop to the heat sink, and ultimately out of the computer. Save yourself some money, and learn how to keep your laptop nice and cool with this guide.

TOOLS:

- Spudger (1)
- High Content Rubbing Alcohol (1)
- Lint-Free Cloth (1)
- Compressed Air (1)
- Phillips #0 Screwdriver (1)
- 1/8" Flathead Screwdriver (1)
- Phillips #00 Screwdriver (1)

PARTS:

- Arctic Silver Thermal Paste (1)

Step 1 — HP Probook 6450b Fan Cleaning & Thermal Paste Replacement



- Shut down your laptop completely.

! Do not simply power off your computer using the power button. This will put the laptop into sleep mode. Instead, shut down the laptop from the start menu.

- Unplug the charger cord and all devices connected to the computer.

Step 2



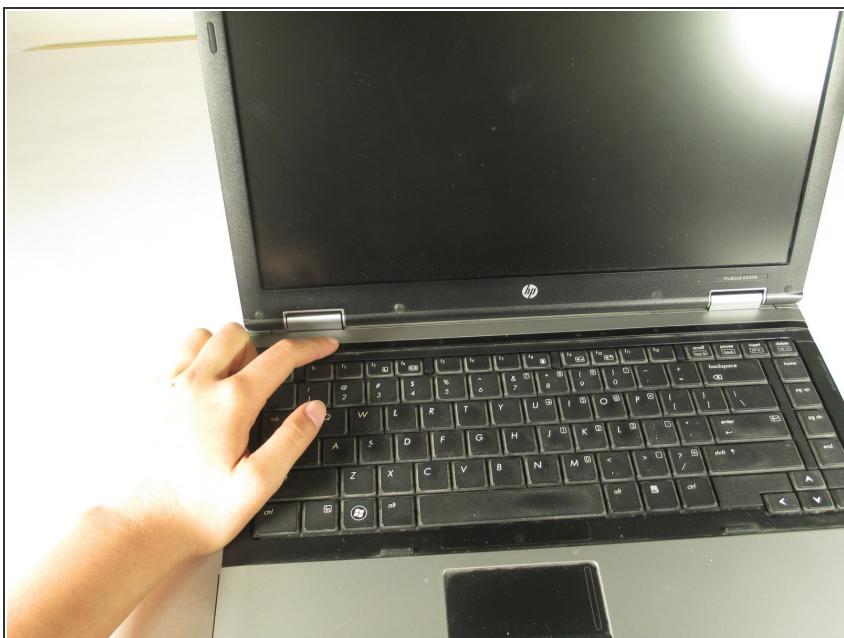
- Flip the laptop over and locate the battery compartment release latch.
- Slide the release latch to the left to release the battery.

Step 3



- Remove the battery.

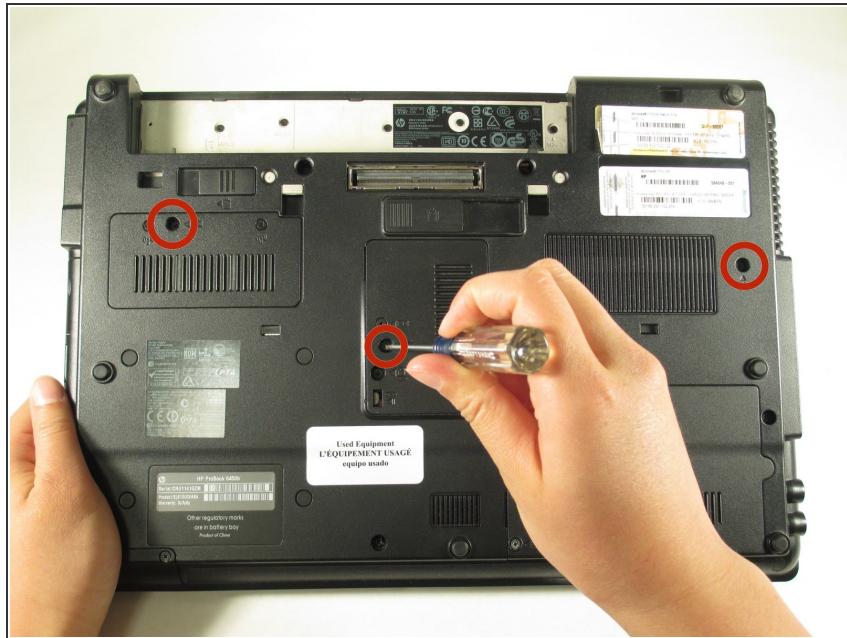
Step 4



 Electrostatic shocks can damage the internal components of the computer.

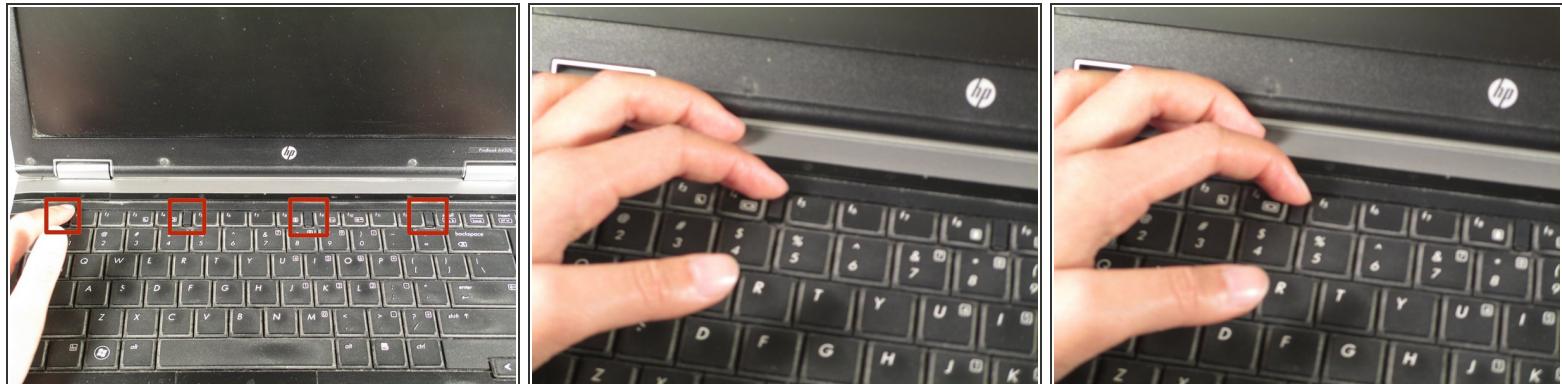
- Press and hold the power button for a minimum of 10 seconds to allow electric charge to dissipate from the motherboard and internal components.
- **Optional:** You may also wear an anti-static bracelet during the repair as a safety precaution. This grounds you to the computer chassis and prevents accidental static discharge from your fingers.

Step 5



- Locate and loosen the 3 Phillips PM 2.5 x 11.0 screws on the bottom side of the computer.

Step 6



- Flip the laptop right side up and open the screen.
- Locate the 4 keyboard tabs. Slide the tabs towards you.

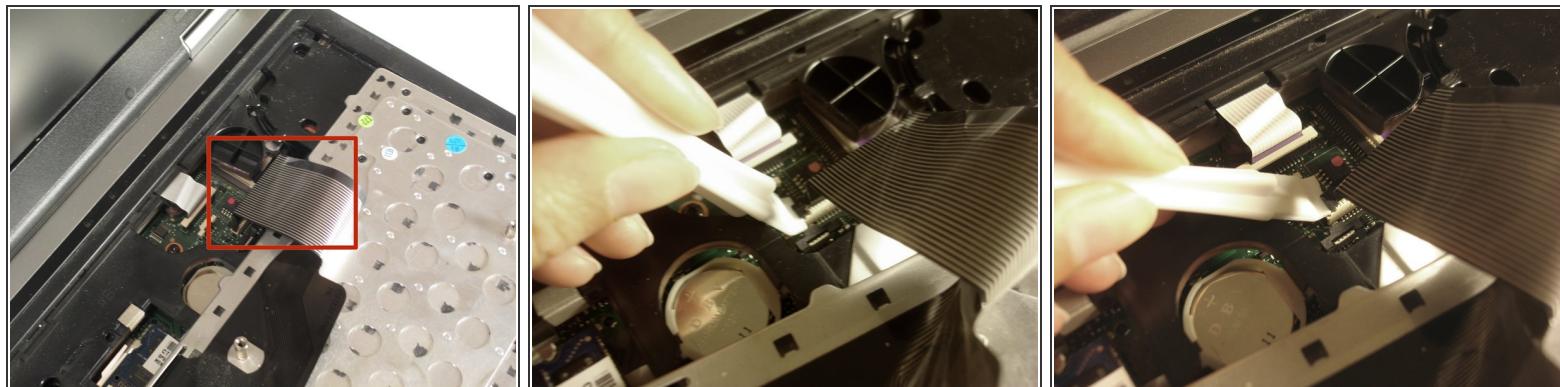
Step 7



- Lift the keyboard by the upper edge, then flip it over so the ribbon cable is exposed.

 Do not attempt to remove the keyboard until the ribbon cable has been disconnected.

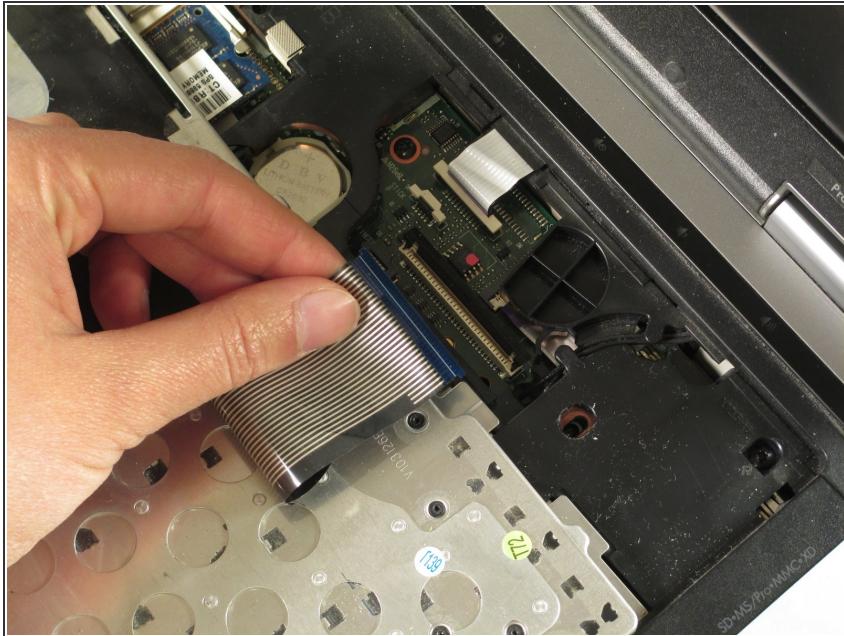
Step 8



- Lift both ends of the plastic tab securing the ribbon cable to the system board with the help of a spudger.

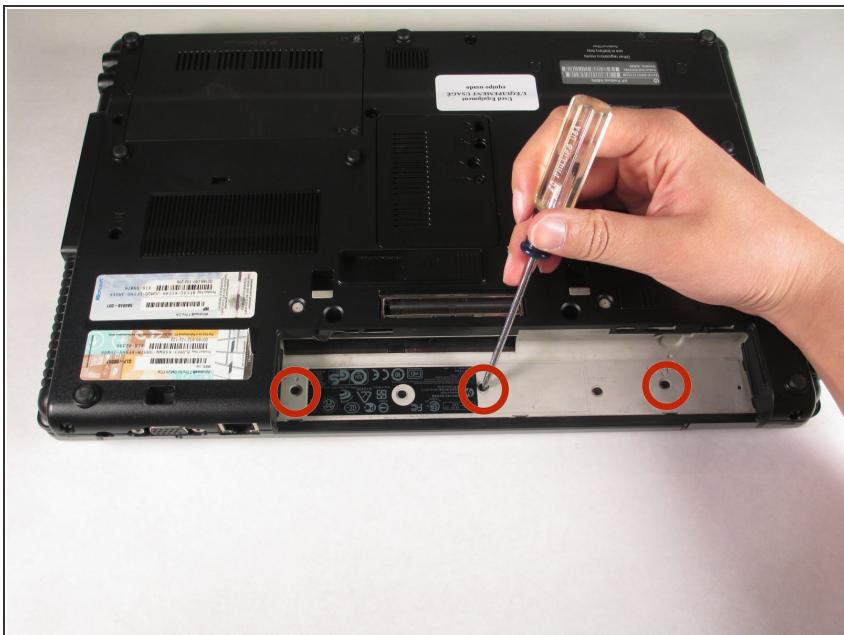
 If you don't have a spudger, any plastic item with a thin edge, like the plastic opening tool pictured here, will work just as well. Guitar picks are also a good alternative.

Step 9



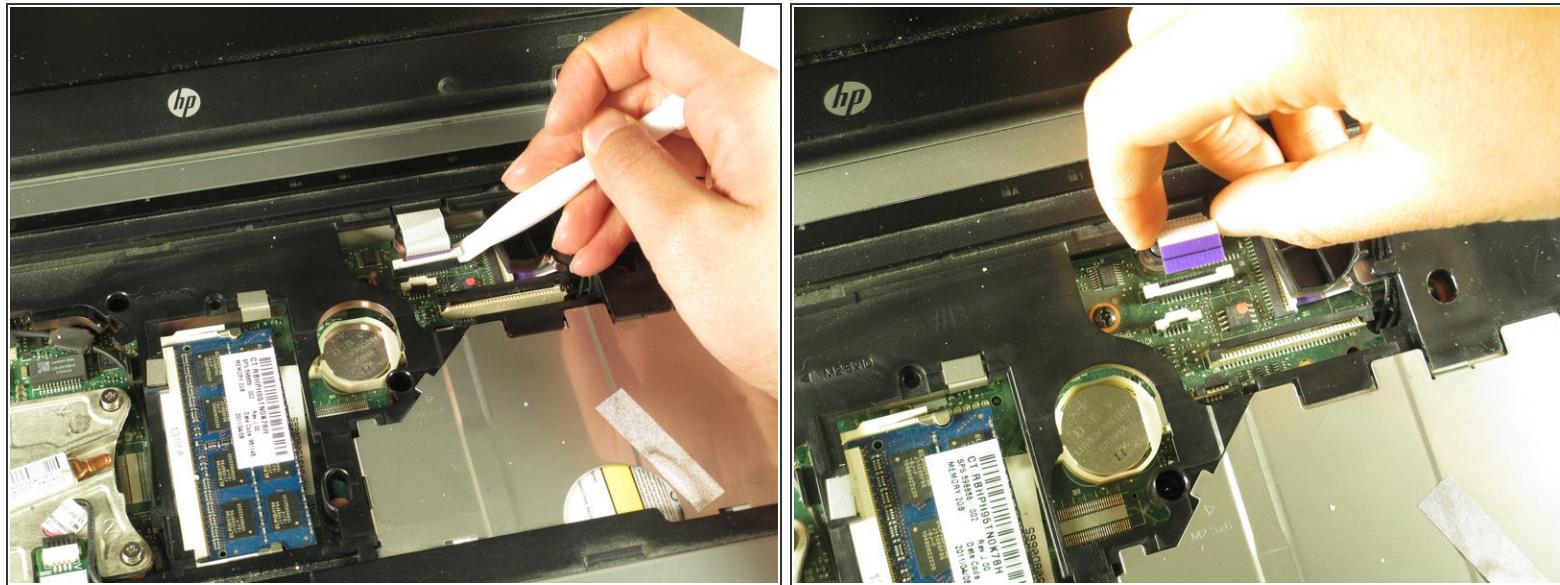
- Remove the keyboard ribbon cable and set the keyboard aside.

Step 10



- Close the laptop and turn it upside down.
- Remove the 3 PM 2.0 x 3.0 screws securing the switch cover.

Step 11



- Flip the laptop right side up, and open the display.
- Locate the LED board ribbon cable. Lift both ends of the plastic tab securing the ribbon cable to the system board.
- Slide out the LED board ribbon cable.

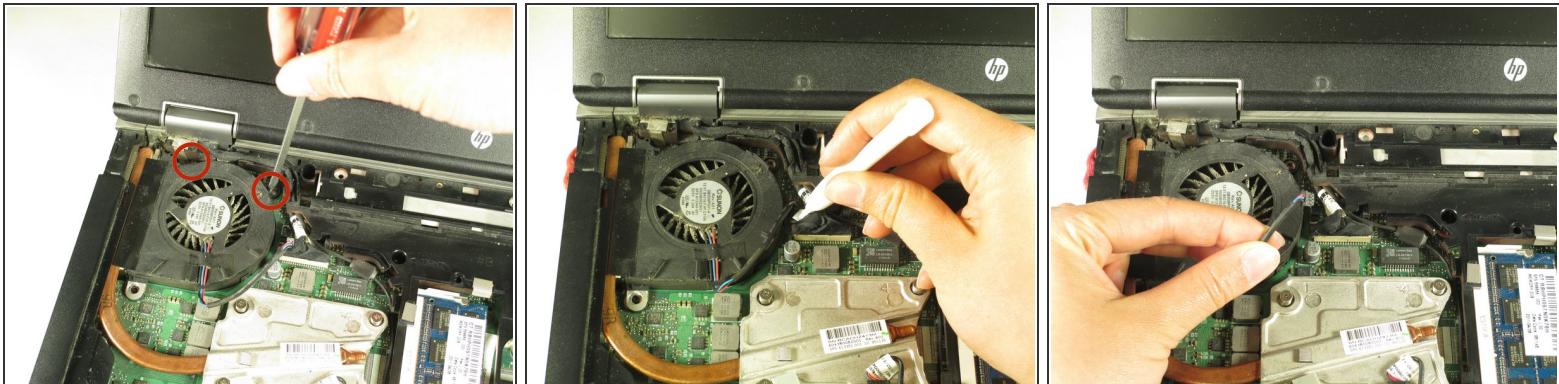
Step 12



- Remove the switch cover.

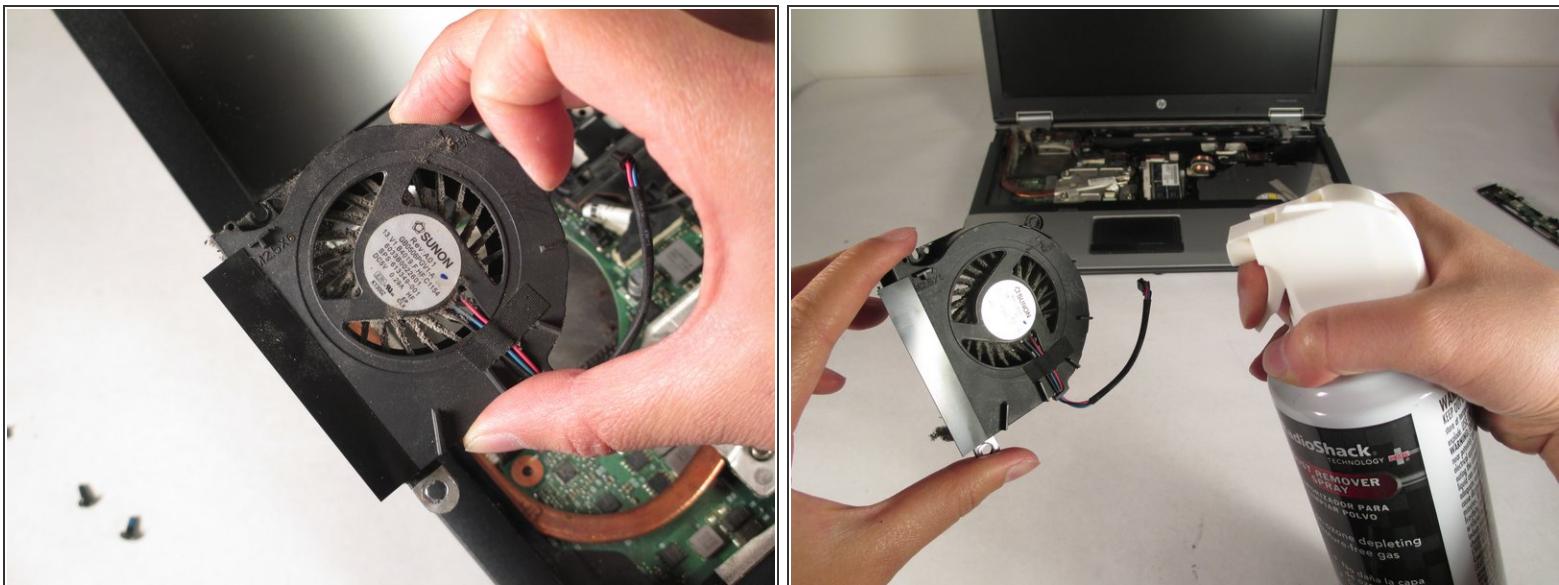
i You may need to use the spudger or opening tool to pry open the switch cover. It is easiest to start from the top edge, closest to the screen.

Step 13



- Locate and loosen the 2 slotted Torx T8M 2.5 x 7.0 screws securing the fan to the motherboard.
- Disconnect the fan cable from the board.

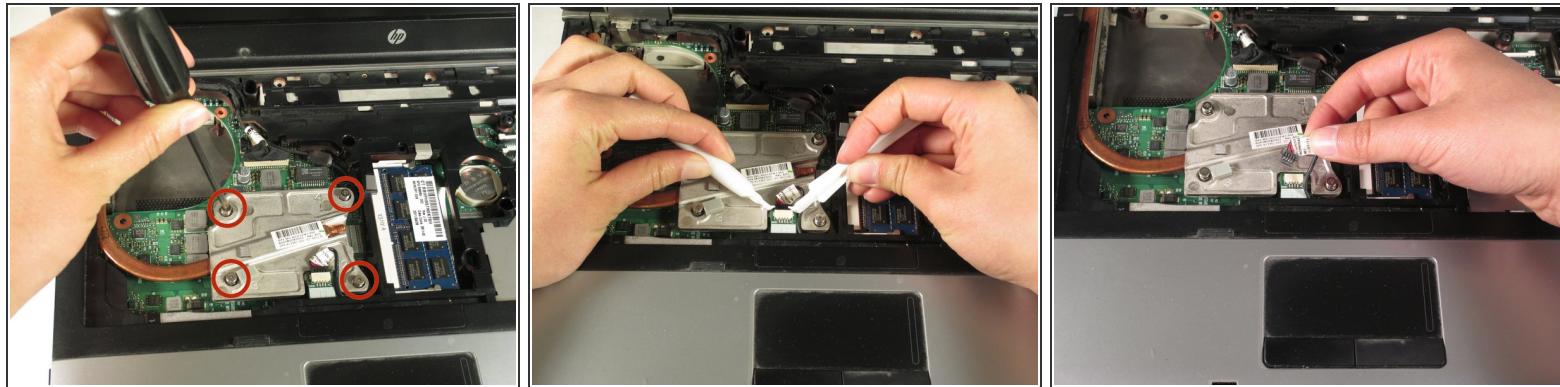
Step 14



- Lift out vent fan.
- Clean the dust from the fan with a small brush and/or compressed air.

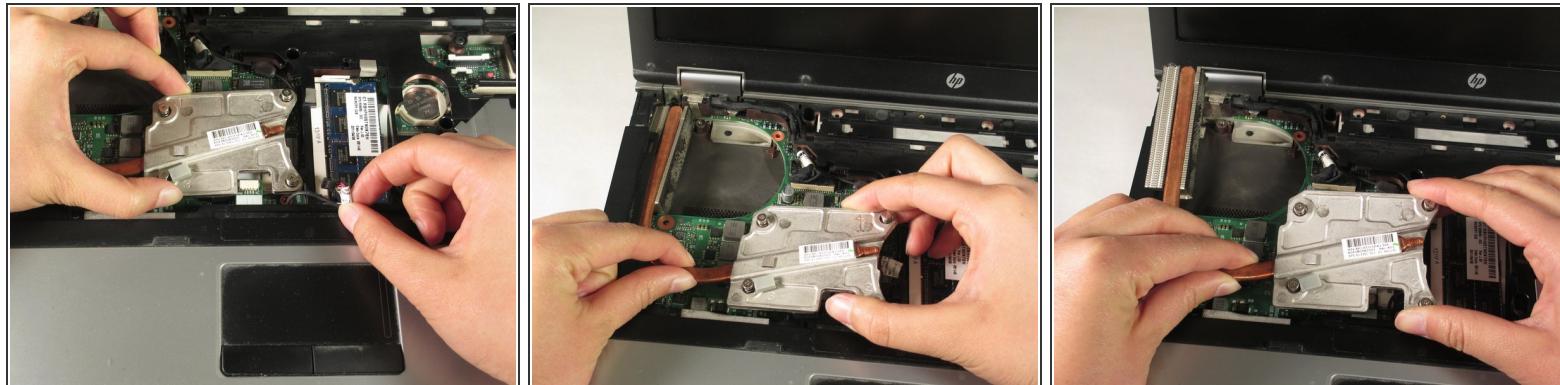
⚠ When using compressed air, avoid tilting the bottle greater than 40 degrees from vertical. Doing so will cause the part and your hand to rapidly cool.

Step 15



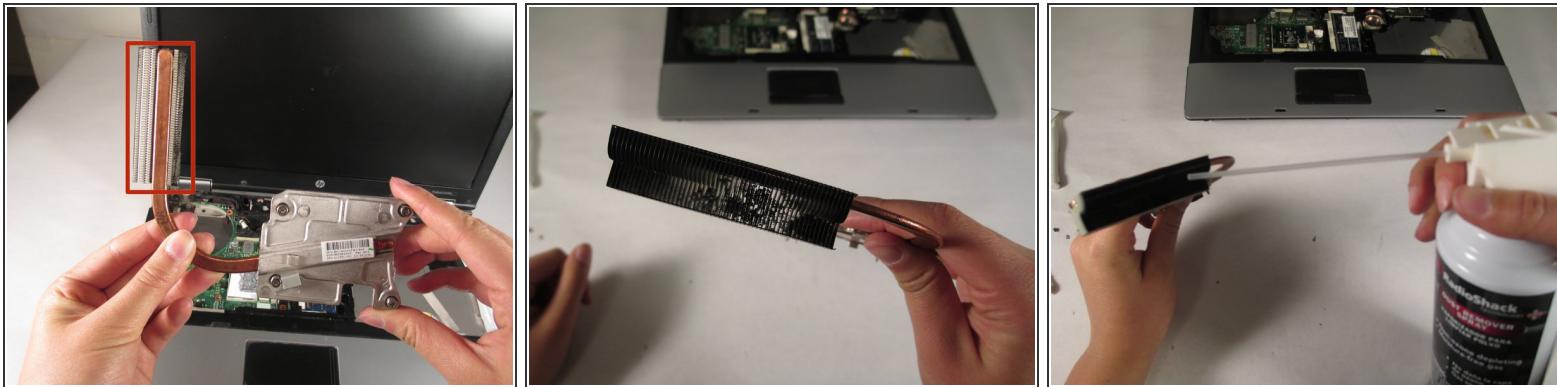
- Locate and loosen the 4 Phillips PM 2.5 x 9.0 screws securing the heat sink.
- You may wish to disconnect the cable adjacent to the heat sink, to make removal easier.

Step 16



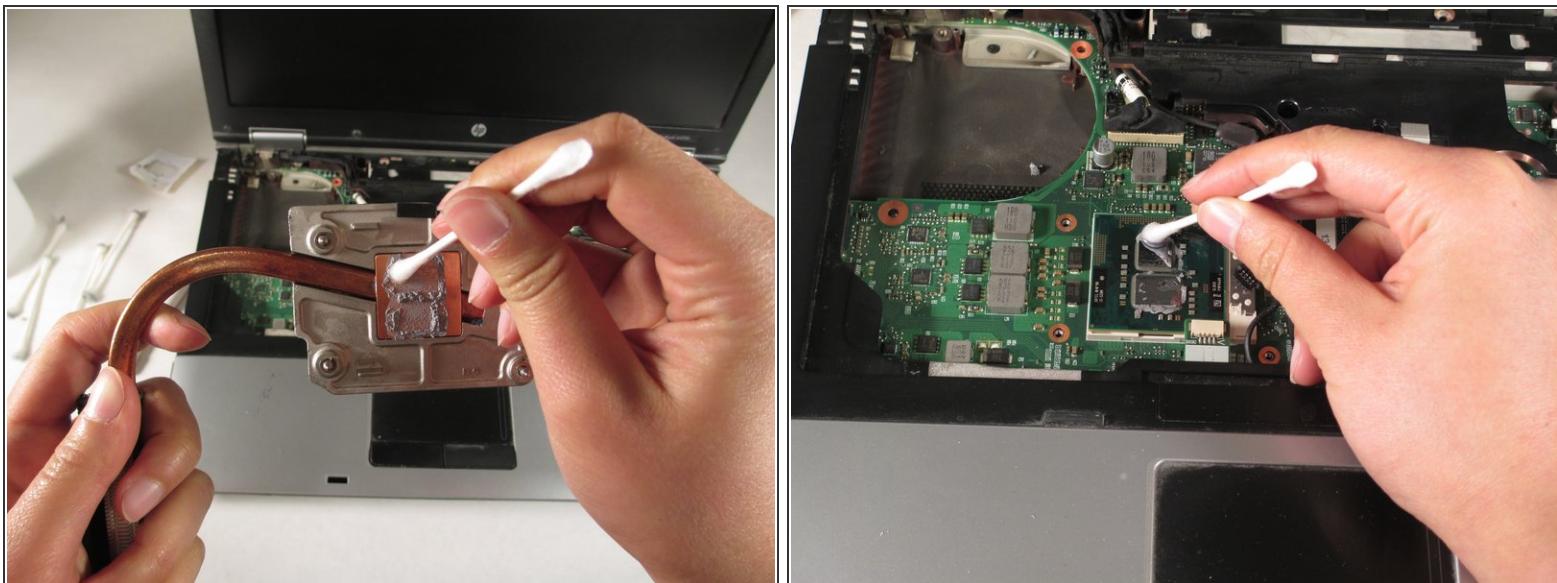
- The thermal paste may have stuck the heat sink to the motherboard. Gently jimmy the heat sink back and forth until it is loose.
- Extract the heat sink.

Step 17



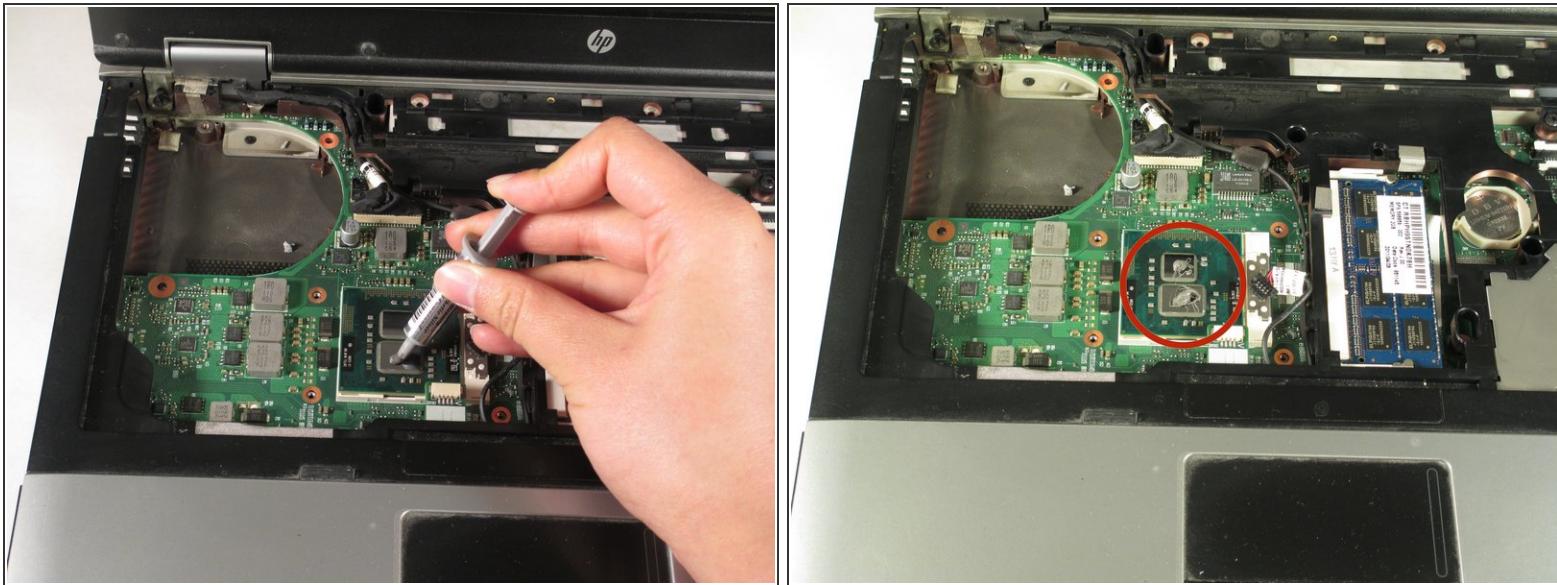
- Remove dust trapped in the heat sink vent with compressed air and/or a small brush.

Step 18



- Remove the old thermal paste from the heat sink and the CPU with a lint free wipe or cotton swab dipped in rubbing alcohol.

Step 19



- Allow the rubbing alcohol to dry completely.
- Squeeze a small quantity of thermal paste onto the component's surface. The gobs should be about the size of a grain of rice.

Step 20



- Reinsert the heat sink into the laptop. Tighten the screws to secure it into place.

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