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INTRODUCTION

The heat sink and the fan assembly are attached directly to the CPU of the laptop to keep it as cool as possible during operation. If the fan stops working, or the heat sink somehow becomes damaged or unattached, the CPU runs a dangerous risk of overheating and becoming permanently damaged. This guide will walk you through replacing the heat sink of your device.



TOOLS:

- [Phillips #1 Screwdriver](#) (1)
 - [iFixit Opening Tools](#) (1)
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Step 1 — Battery



⚠ Make sure the laptop is off.

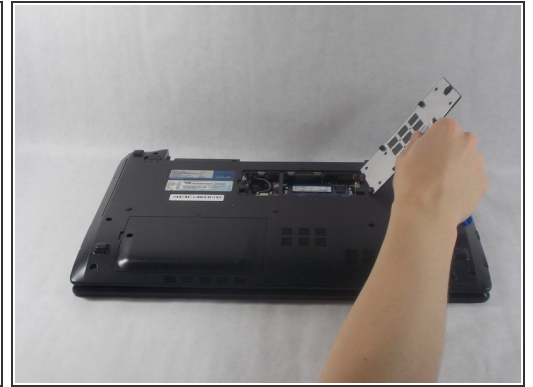
- Flip the laptop upside down so that the battery is facing you.

Step 2



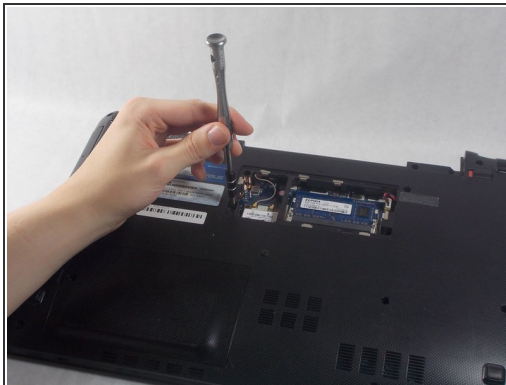
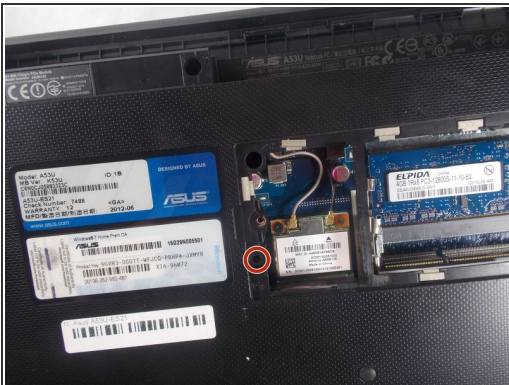
- Move the two sliders towards the outer edge of the laptop.
- Pull the battery out with your left hand while holding the right slider.

Step 3 — Optical Drive



- Remove the 5mm screw using a Phillips #1 screwdriver.
- Use the iFixit opening tools to remove the RAM panel.

Step 4



- Remove the 7mm screw using a Phillips #1 screwdriver.
- Pull the optical drive out from the side of the laptop.

Step 5 — Keyboard



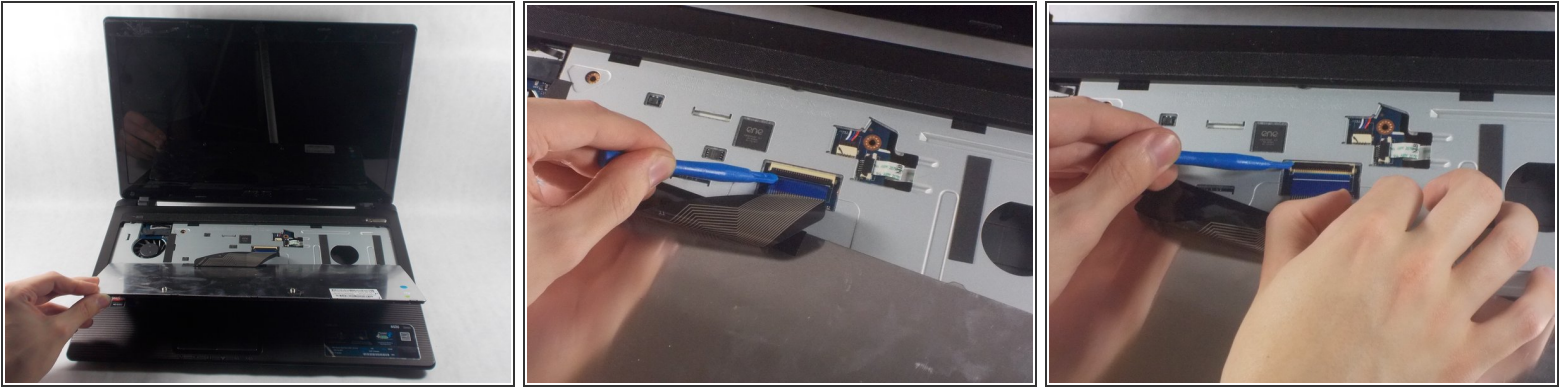
- Remove the RAM cover from the bottom of the keyboard.
- Remove the 5mm screw keeping the panel in place using a Phillips #1 screwdriver.
- Work the pry tool along the edge to finish removal.
- Unscrew the two 7mm screws marked with an engraved "K" using a #1 Phillips screwdriver.

Step 6



- Orient the computer so the keyboard is facing toward you with the screen at the top.
- Find the three buttons to depress at top of the keyboard, set in the crack between the casing and the keyboard, highlighted here in red.
- Use the pry tool to depress the buttons. The keyboard should pop out.

Step 7



- Fold the keyboard out towards you. It should still be connected by a ribbon to the rest of the computer.
 - Gently use the opening tool to lift the black piece holding the ribbon down and remove the ribbon.
- ☑ The black piece should cover the white line on the ribbon when it is replaced.

Step 8 — Motherboard



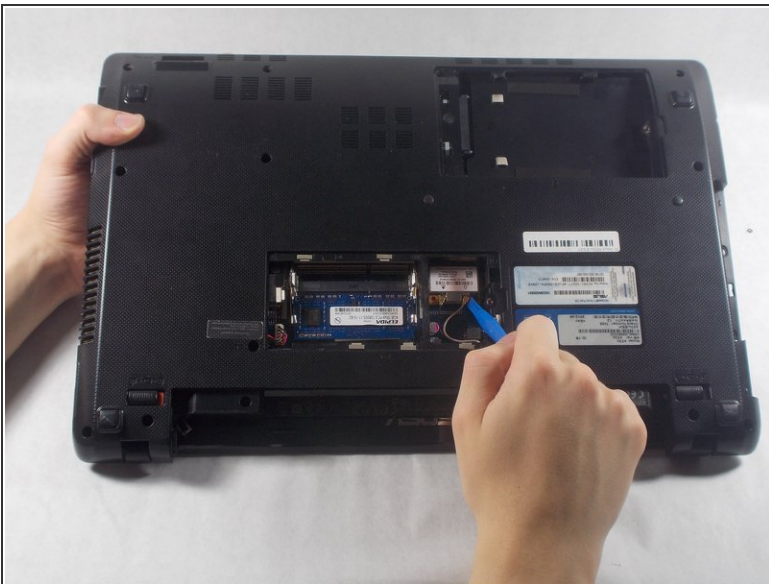
- Close the laptop and place it upside down.
- Remove the twelve 7mm screws using a Phillips #1 screwdriver.

Step 9



- Remove the two 2mm screws using a Phillips #1 screwdriver.

Step 10



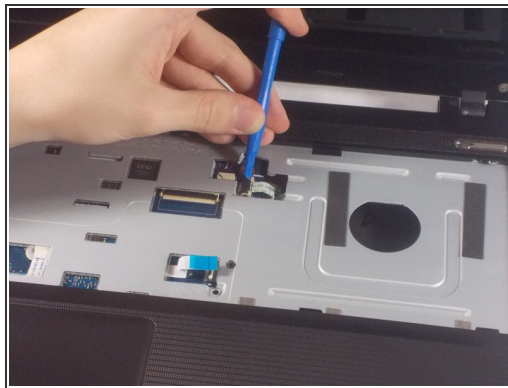
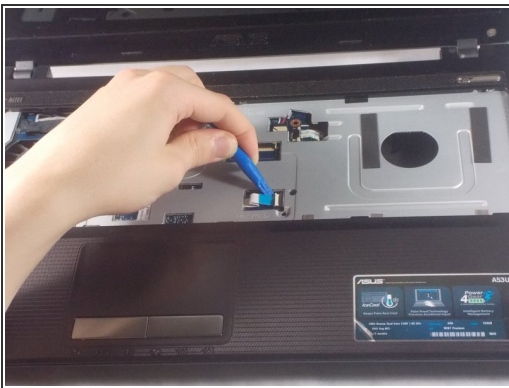
- Pull the connectors away from the wireless card using the plastic opening tools.
- Pull the white connector from its socket in the RAM panel.

Step 11



- Flip the laptop over again, open it, and unscrew the three 7mm screws using a Phillips #1 screwdriver.

Step 12



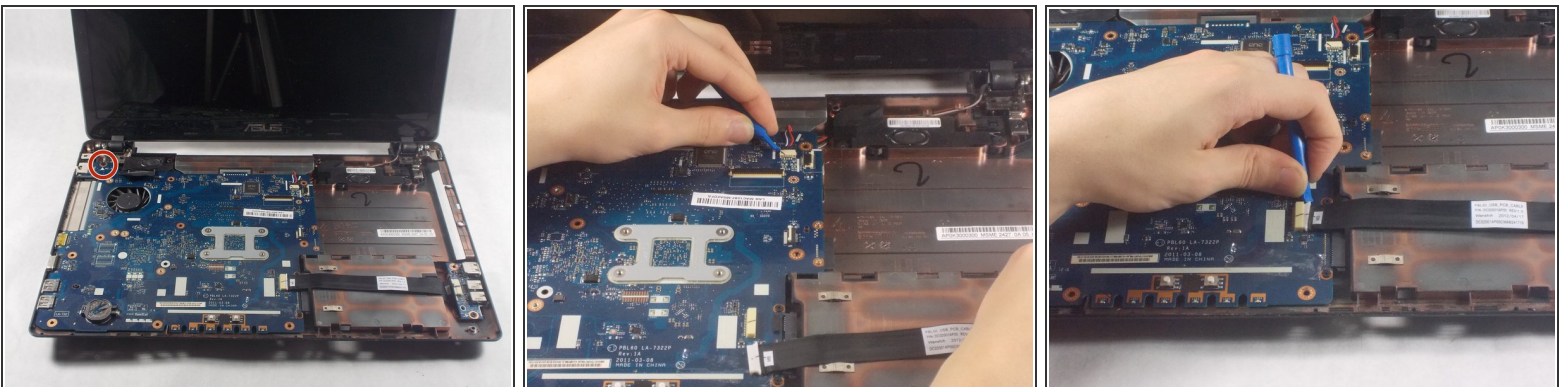
- Gently pull the tan flap off of the cable using the plastic opening tool.
- Push the tan piece towards the cable and release it using the plastic opening tool.
- Pull the black flap off of its connector.

Step 13



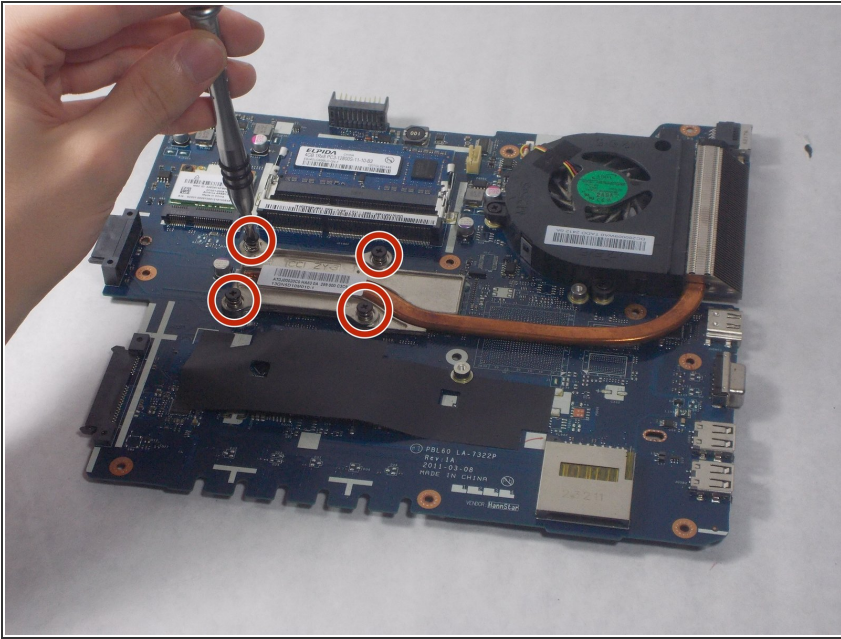
- Separate the front plate of the laptop from the back using the plastic opening tool.

Step 14



- Remove the single 7mm screw from the motherboard using a Phillips #1 screwdriver.
- Pull to two shown cables from their sockets using the plastic opening tools.
- Gently remove the motherboard from the laptop.

Step 15 — Heat Sink



- To remove the heat sink, unscrew the four 7mm screws using a Phillips #1 screwdriver.
- Remove the heatsink from the device.

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