

# How to Clean a Laptop Cooling Fan

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## Overview

The design and creation of the portable “Laptop” computer has been one of the most groundbreaking technology breakthroughs of the past 20 years. Today, it is uncommon for someone to not own a laptop; many people may even own more than one. However, a small percent would never think to clean out the inside of the machine, especially the cooling fan. The purpose of the cooling fan is to regulate the internal temperature of the laptop to ensure that no damage is caused due to excessive heat. Different model laptops have fans varying in power and size depending on their individual requirements.

This instruction set will be specific to a Lenovo brand laptop manufactured in 2011. Even though the images and specific instructions will be particular to this model, the general techniques and concepts can be applied to most laptops.

## Materials

- Laptop
- Precision Electronics Screwdriver Set
- Q-Tips
- Tissues or other cotton wipes
- Piece of paper and writing utensil



Precision Electronics Screwdriver Set

## Prep Work

1. Fully power off laptop, and remove battery if possible.

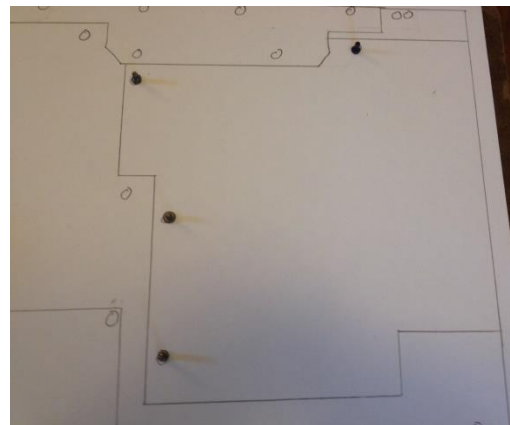
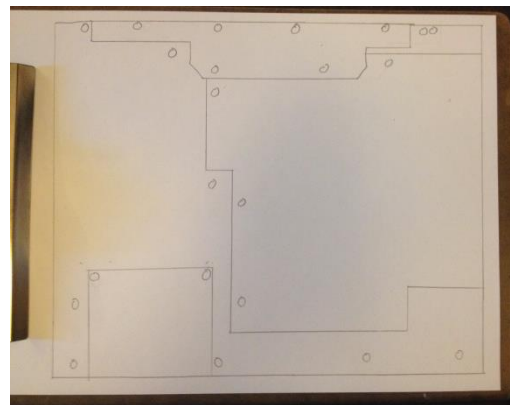
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**WARNING: Failure to Complete This Step Could Cause Injury to User or Damage to Machine.**

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2. Sketch a basic outline of the bottom of the laptop, on a piece of blank paper. Draw circles on the sketch, indicating where screws are located.

**Note:** Creating the sketch is to ensure that the screws are removed in an orderly fashion. This is especially important for reassembly, so that the proper screws are going in their corresponding holes.



## Disassembly

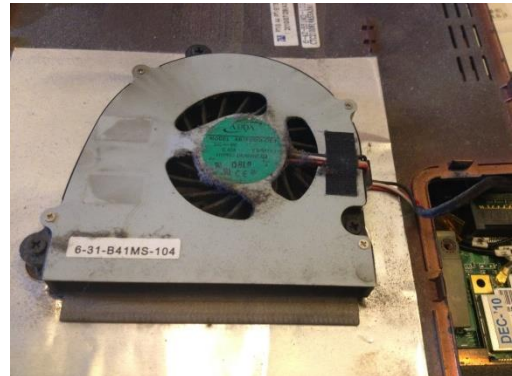
3. Remove the 4 black screws on the main panel using the #0 Phillips Head Screwdriver, and the screws in their corresponding spots on the sketch sheet.
4. Pry open the panel, being very cautious of the wire connecting the panel to the rest of the machine.



5. Unplug the power supply of the fan unit from the circuit board of the laptop.



6. Disconnect the fan from the panel by removing the 3 black screws using the #0 Phillips Head Screwdriver, and place the screws in their designated area on the sketch sheet. Then place the panel to the side.



7. Unscrew the 4 small silver screws on the fan unit using a 1.4 mm Flat Head Screwdriver, and remove the cover.

**Note:** The cover on the other side could be removed in the same fashion for more thorough cleaning.

## Cleaning

8. Wipe down all surfaces of the fan, using a tissue for the larger areas and a Q-tip for the smaller areas.

**Note:** Be sure to clean in between the individual fan blades.



9. Wipe down the main surfaces of the panel with a tissue, and use a Q-tip for the smaller areas.

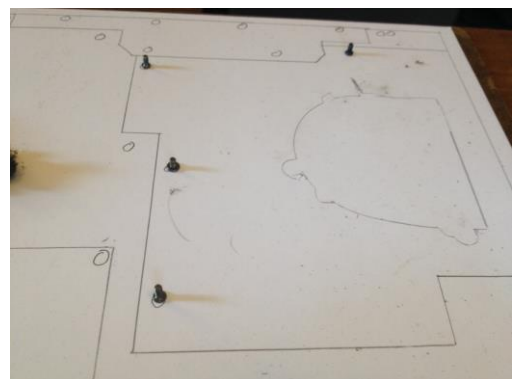
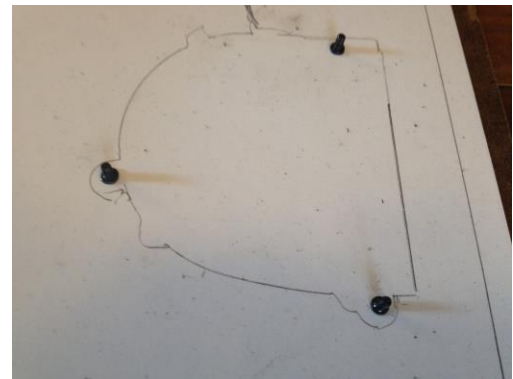


10. Remove dust buildup from heat sink (large finned copper piece) and surrounding areas by grabbing the large particles with your hand and wiping smaller areas with a Q-tip.



## Reassembly

11. Replace the 4 small silver screws that secure the cover of the fan to the rest of the unit.
12. Reattach the fan unit to main panel using the 3 black screws.
13. Plug the power supply of the fan unit back into the circuit board of the laptop.
14. Place the main panel back into body of the laptop and replace the 4 black screws.
15. Replace the battery (if initially removed) and power on the laptop.



# Before and After Photos

**BEFORE**



**AFTER**

