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# INTRODUCTION

This guide will show you how to remove and replace the laptop fan.



## TOOLS:

- [Phillips #1 Screwdriver](#) (1)
  - [T4 Torx Screwdriver](#) (1)
  - [iFixit Opening Tools](#) (1)
  - [Spudger](#) (1)
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## Step 1 — Battery



- Make sure the laptop is unplugged and powered off.
- Locate the battery latches on the underside of the laptop.

## Step 2



- Slide the right latch to the right until you hear it lock into place.
- Slide the left latch to the left and hold it.



## Step 3



- Slide the battery out towards you.

## Step 4 — Keyboard



- Pry up the thin narrow strip of facing above the keyboard using the opening tool.

## Step 5



- Remove the four screws securing the keyboard using the T4 Torx screwdriver,

## Step 6



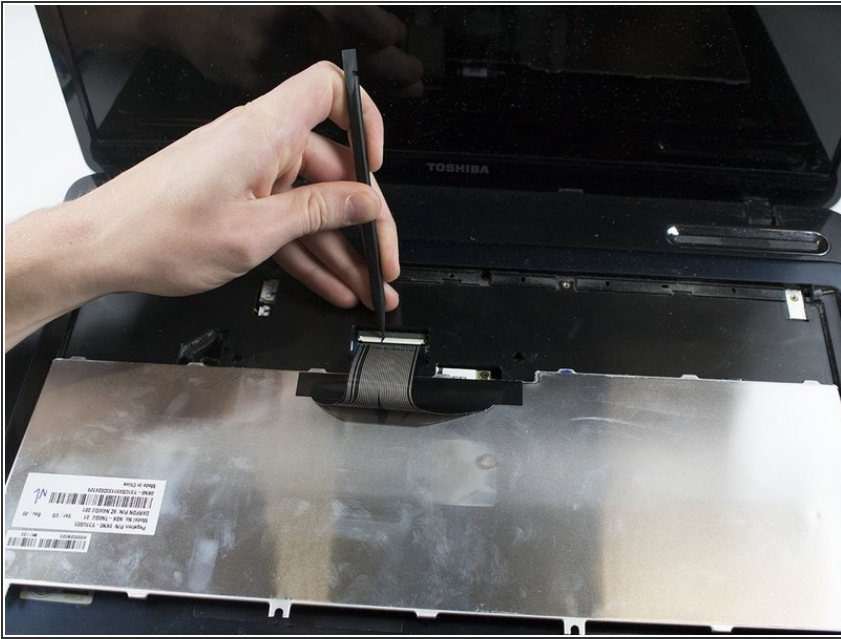
- Lift the keyboard slowly using the opening tool and lean it toward touchpad.



It will still be held by the connector ribbon. Make sure not to pull out the connector ribbon.



## Step 7



- The ribbon is attached by a white clip. Wedge the white clip up carefully using the spudger. This will release the connector ribbon and you can now remove the keyboard.

## Step 8 — Fan



- Remove the twelve screws from the underside of the laptop using the Philips #1 screwdriver.

## Step 9



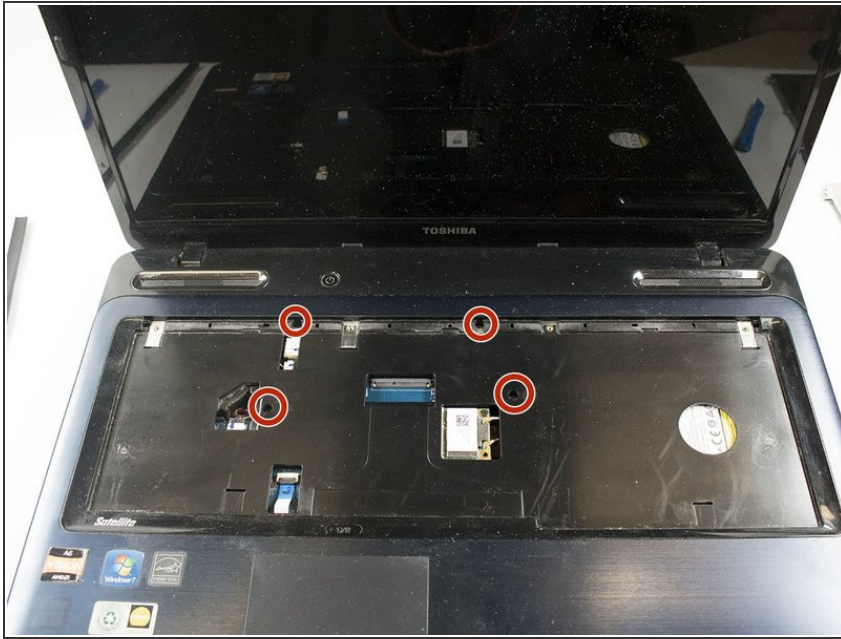
- Remove the three screws from the underside of the laptop using a Phillips #1 screwdriver.

## Step 10



- Remove the two screws from the underside of the laptop where the battery was located using the Philips #1 screwdriver.

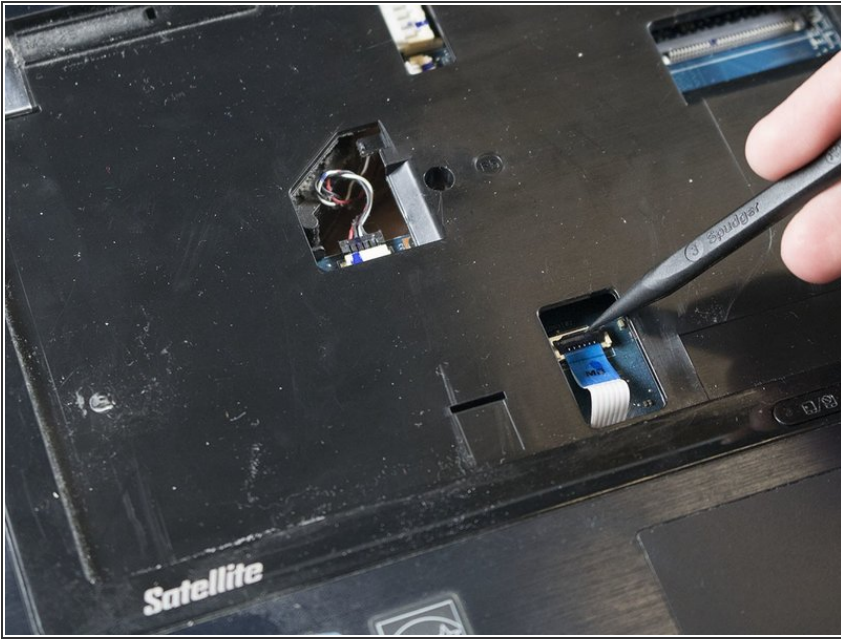
## Step 11



- Remove the four screws securing the keyboard using the Philips #1 screwdriver .



## Step 12



- Detach the ribbon cable carefully using the spudger to gently pry up on the clip until it releases the ribbon cable or lift up on the blue tab gently until the clip releases the ribbon cable.

## Step 13



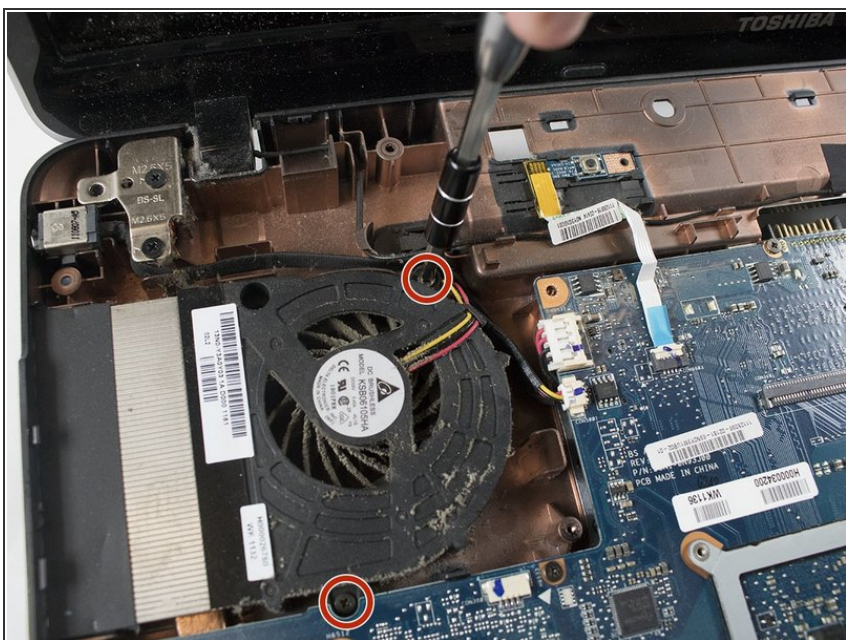
- Disconnect the wire connector by using the flat end of spudger to gently pry it apart from the connection point.
- ⓘ This can also be accomplished by holding the connector and gently wiggling the connector loose.

## Step 14



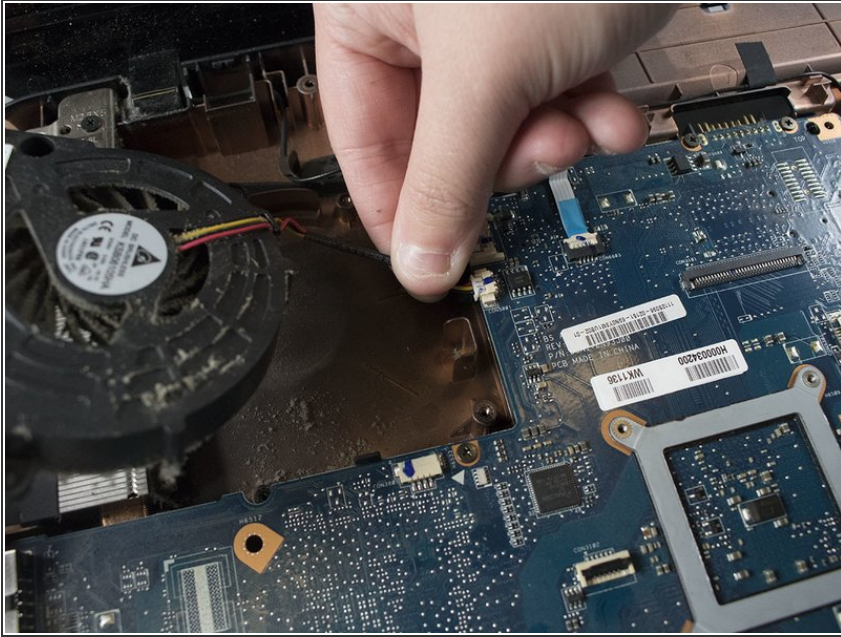
- Remove the top plastic cover by lifting from one of the corners it should be easy to removed.

## Step 15



- Remove the two screws securing the fan using the Phillips #1 screwdriver .

## Step 16



- Disconnect the fan wire connector using the flat end of spudger to gently pry it apart from the connection point, then remove the fan.
- ⓘ This can also be accomplished by holding the connector and gently wiggling the connector loose.

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