



# Dell XPS 12 9Q23 Fan Replacement

The Basics: This guide provides an overview on...

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# INTRODUCTION

## The Basics:

This guide provides an overview on the replacement of the Dell XPS 12 9Q23 cooling fan. The cooling fan blows air through the heat tubes of the heat sink which keeps the CPU cool.

## Necessary Background

The ability to use a screwdriver with adequate applied pressure to prevent screw stripping is required. Also, the steadiness of hand to safely remove screws without losing them is required. Finally, dexterity for carefully pulling plugs from circuit boards is required.

The best way to trouble shoot this repair is to feel for air flowing from the vents underneath your computer. If you are not sure that there is air coming out, lift the laptop up by its sides while it is still on and press the bottom right corner to your ear. If there is a whirring sound that means your laptop fan is functional. Remember to be patient, if your laptop has not warmed up yet then it may not automatically turn on your fan even if it was installed properly.

## Notes for Other Work

Whenever the heat sink is removed, [replacing the thermal paste](#) on the heat spreader's face is recommended. Prior to beginning this repair, be sure to power off the device and disconnect from the power adapter.

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### TOOLS:

[T5 Torx Screwdriver](#) (1)

[Phillips #00 Screwdriver](#) (1)

[Thermal Paste](#) (1)

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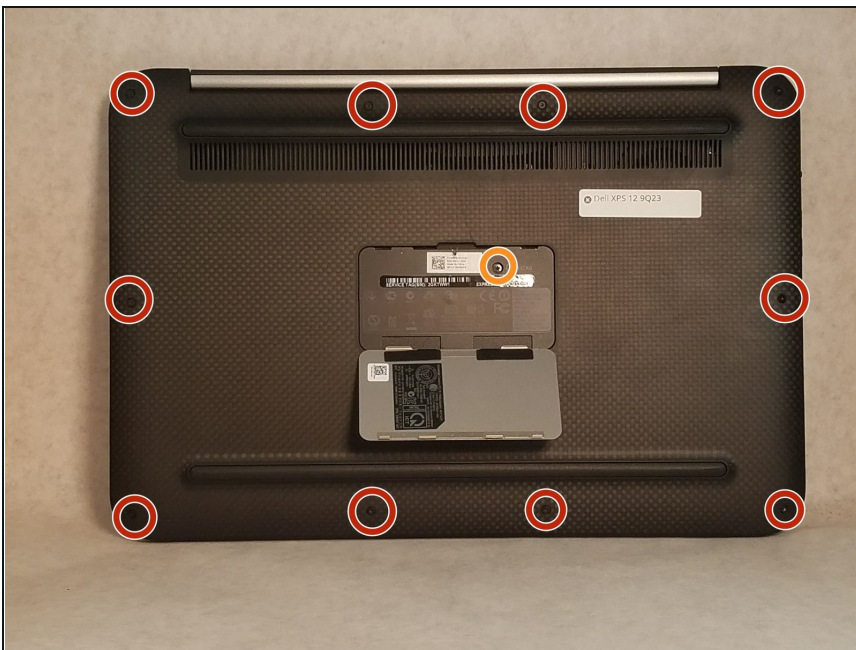
## Step 1 — Cooling Fan



**⚠ Caution:** Ensure your laptop has been powered down.

- Close the laptop, flip the laptop over, and pop off the back small panel with a flathead screwdriver. The panel will be hanging by the hinges once open.

## Step 2



- Use a T5 Torx screwdriver to remove the screws along the edge of the bottom cover.
- ① Use a magnetic board if possible to keep track of screws.
- Open the center cover and use a Phillips #00 screwdriver to remove single screw.

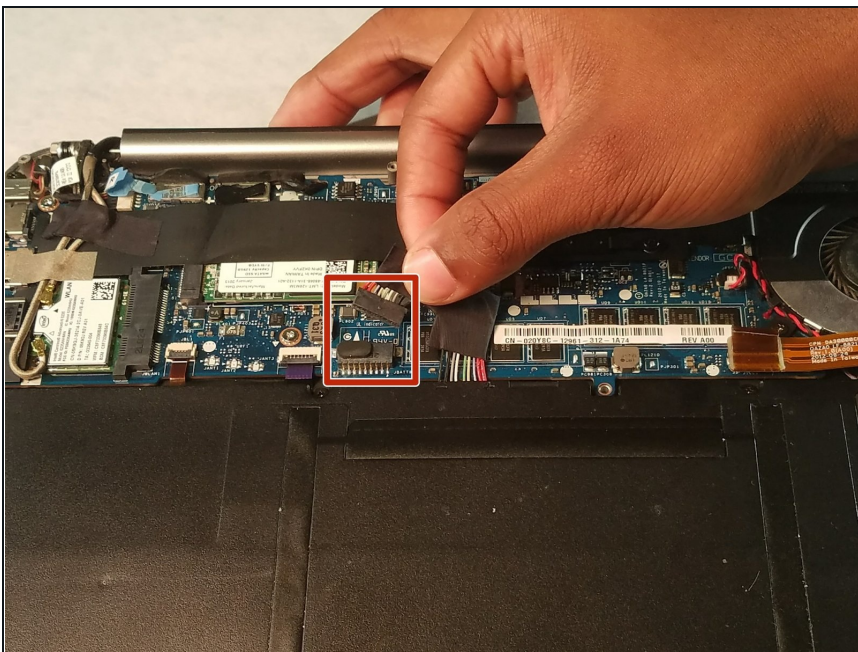


### Step 3



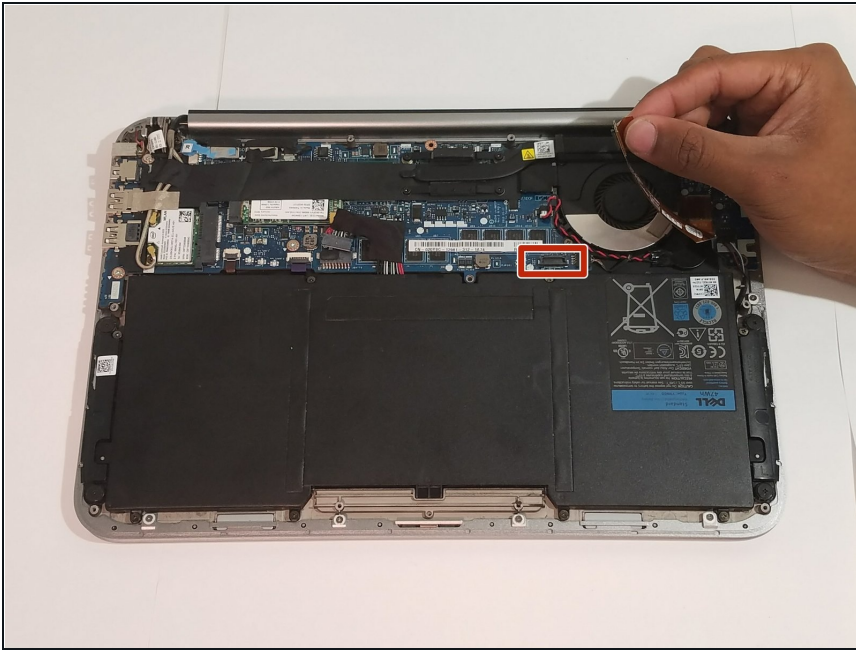
- Carefully remove the back cover.

### Step 4



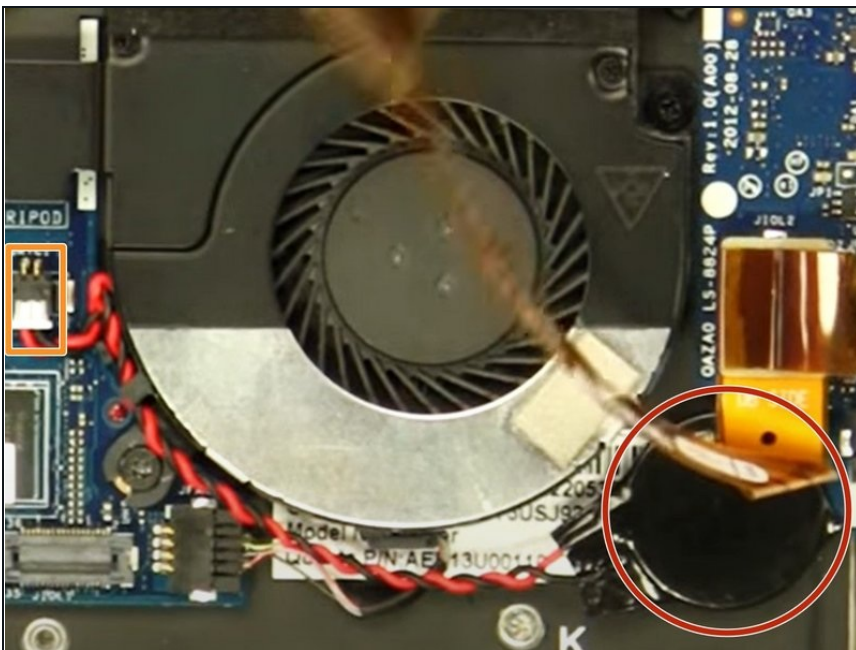
- ⚠ Caution: Be mindful of static electric charge across the battery port. Usage of an [antistatic strap](#) is recommended but not required.
- Disconnect the battery to prevent electrical shock.
- ⓘ If battery replacement is desired then the battery may be removed at this point via removal of the battery's perimeter screws.

## Step 5



- Disconnect yellow-colored ribbon cable from its port which sits at the bottom left of the fan housing.

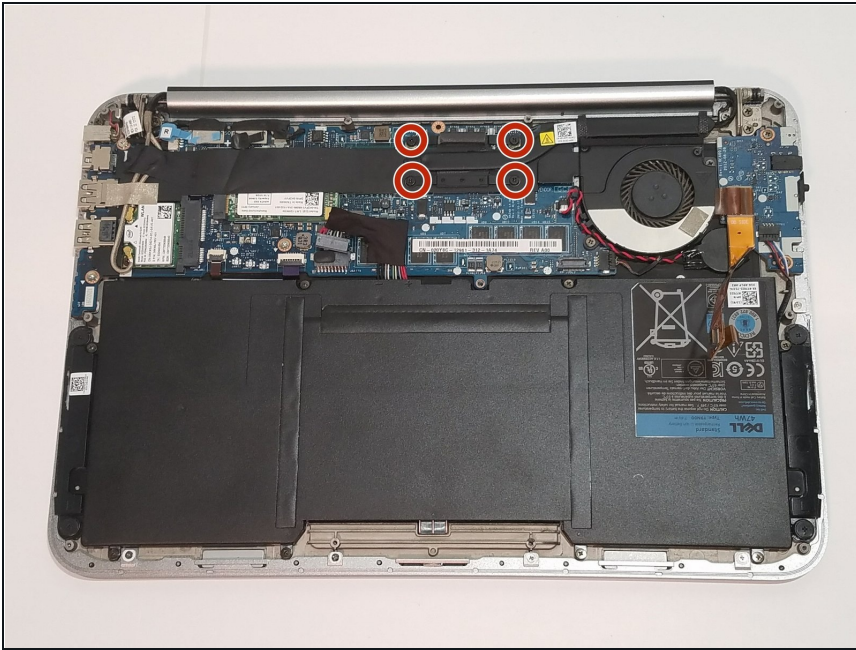
## Step 6



- Dislodge the CMOS battery.
- Unplug CMOS cable.
- ① This step is not completely necessary, it allows extra room to maneuver the fan in and out during replacement.

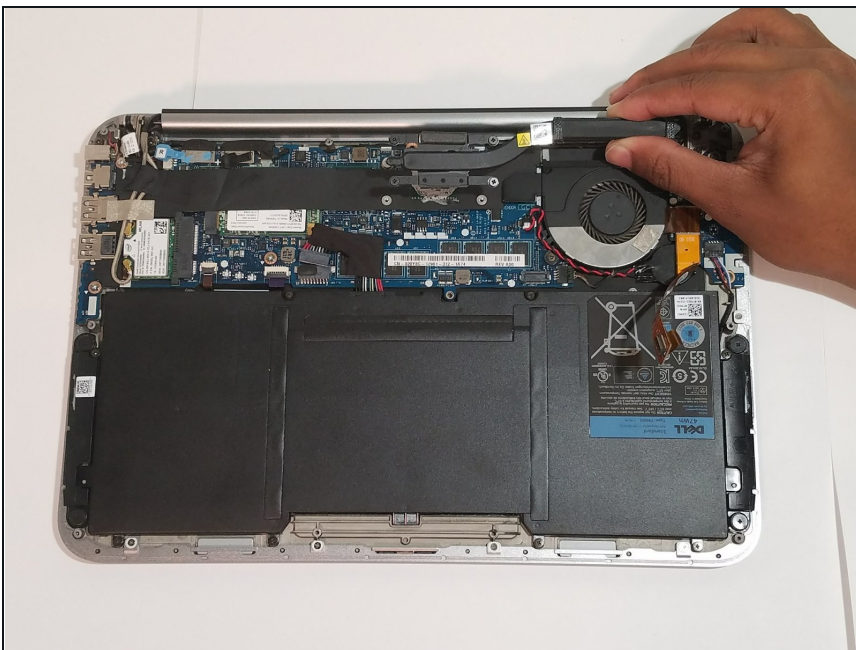


## Step 7



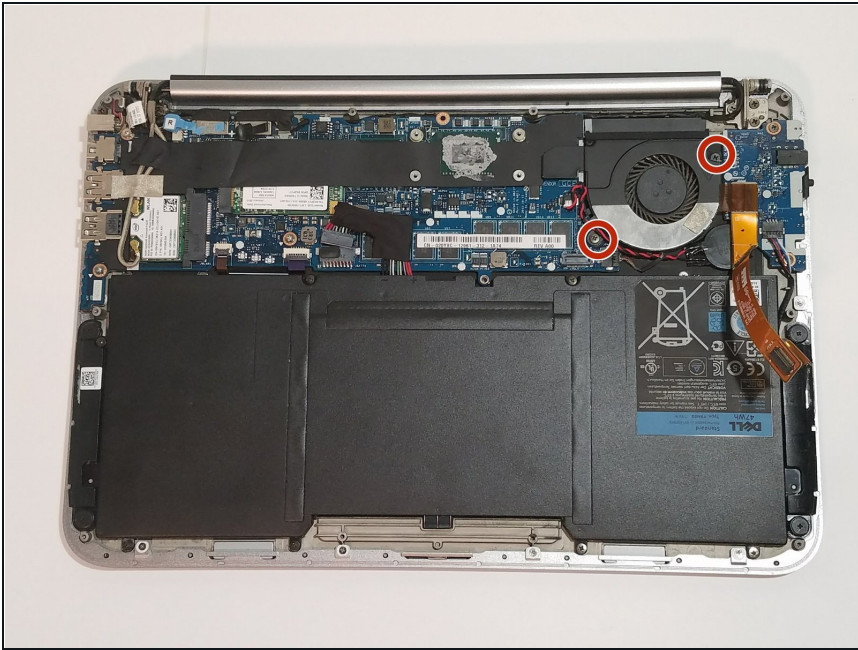
- Use a Phillips #00 screwdriver to loosen the screws that secure the heat sink's heat spreader.
- ① Screws cannot be fully removed from heatsink.

## Step 8



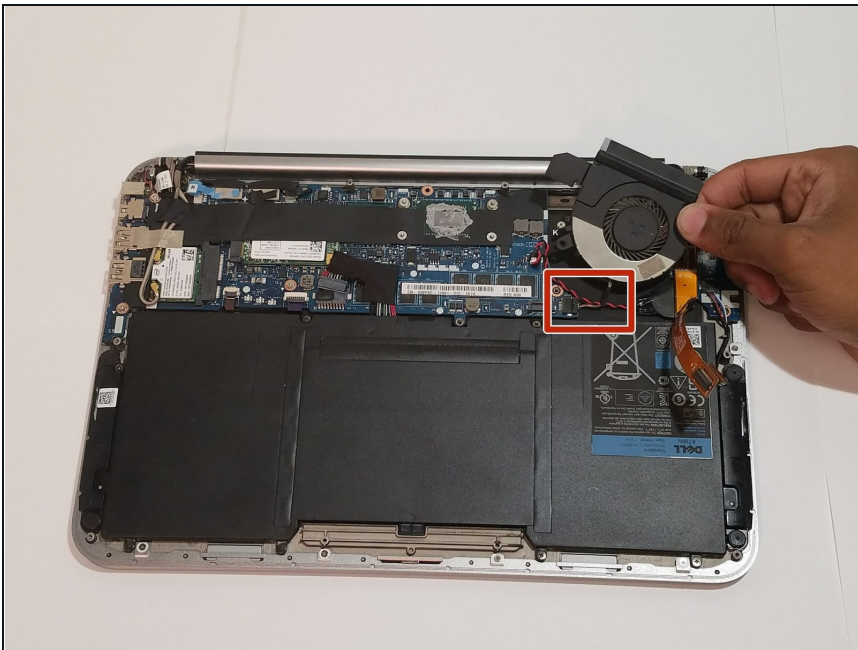
- Grip the heat sink from the sides and carefully lift it up to remove it.
- ① Heatsink is a device used for absorbing heat and necessary to remove to reach the fan.
- ① At this time there will be a whitish powder between the heatsink powder and the CPU. This powder below the heat spreader is degraded thermal paste. DO NOT wipe away this powder unless the thermal paste will be replaced upon reassembly.

## Step 9



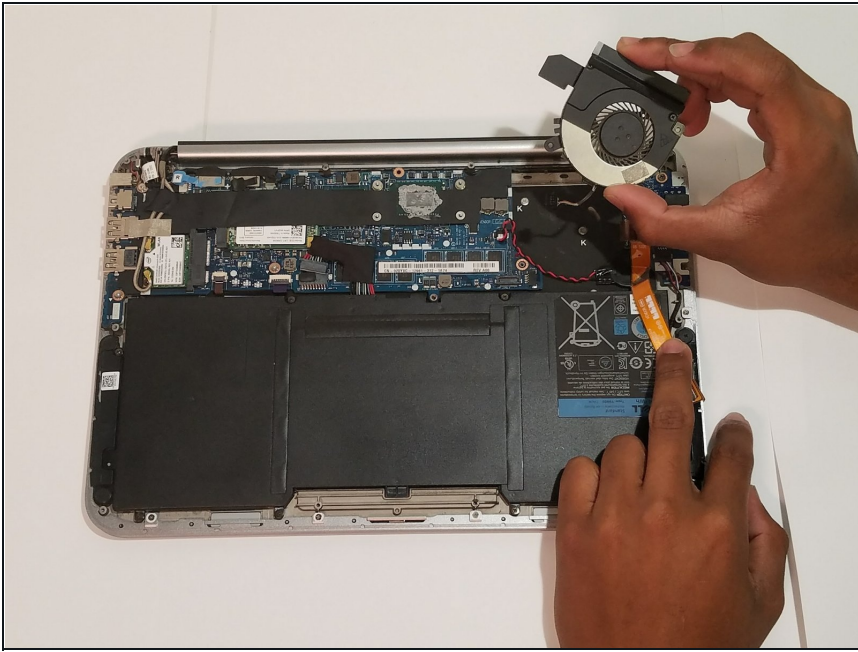
- Use a Phillips screwdriver to remove the two cooling fan screws.

## Step 10



- Unplug the fan cable.

## Step 11



- The cooling fan can now be removed and a new one can be installed.

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