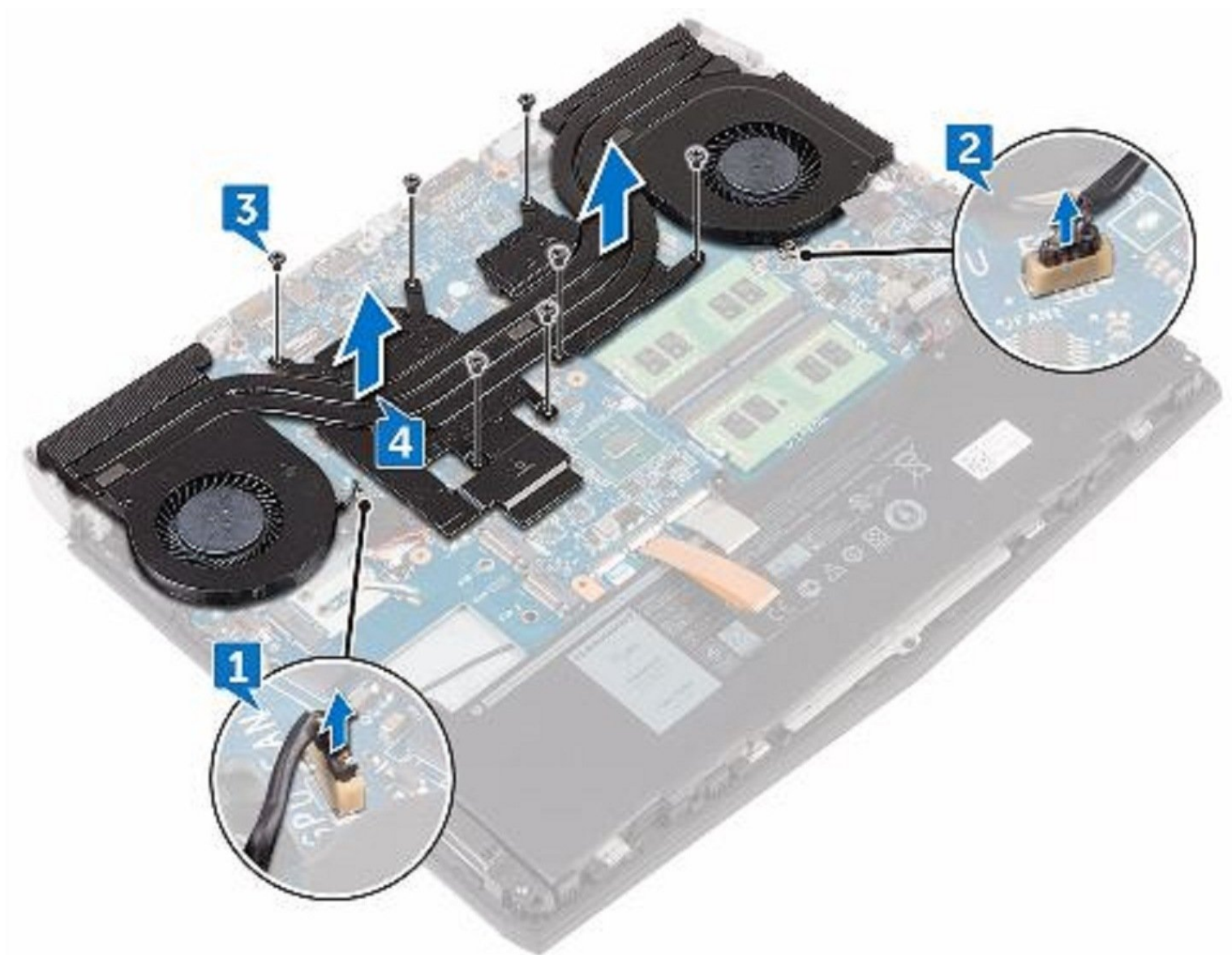# Dell Alienware 13 R3 Heat-Sink Assembly Replacement

In this guide, we will show you how to remove and replace the Heat-Sink Assembly.

Written By: Terrence15

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INTRODUCTION

In this guide, we will show you how to remove and replace the Heat-Sink Assembly.

🔧 TOOLS:

- Pro Tech Toolkit (1)

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Step 1 — Loosen the Screws

⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before Working Inside Your Computer. After working inside your computer, follow the instructions in After Working Inside Your Computer.

● Loosen the five captive screws that secure the base cover to the computer base.

Step 2 — Pry the Base Cover

● Using a plastic scribe, gently pry the base cover to release the tabs on the base cover from the slots on the computer base.

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Step 3 — Lift the Base Cover

- Lift the base cover off the computer base.

Step 4 — Disconnect the Battery Cable

- Using a plastic scribe, disconnect the battery cable from the system board.

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Step 5 — Press and Hold the Power-Button

- Press and hold the power button for five seconds to ground the system board.

Step 6 — Connect the Battery Cable

- Connect the battery cable to the system board.

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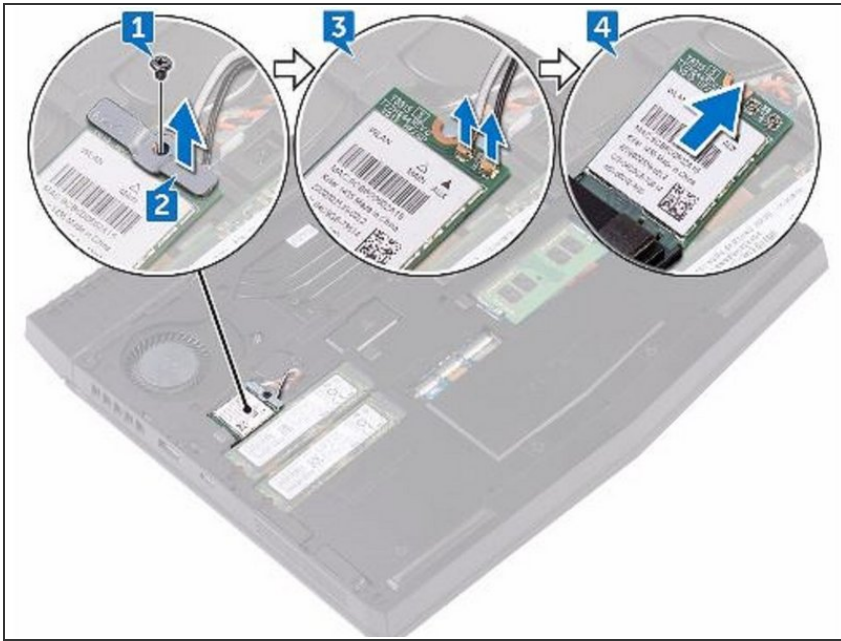
Step 7 — Slide the Tabs

- Slide the tabs on the **NEW** base cover into the slots on the computer base and snap the base cover into place

Step 8 — Tighten the Five Captive Screws

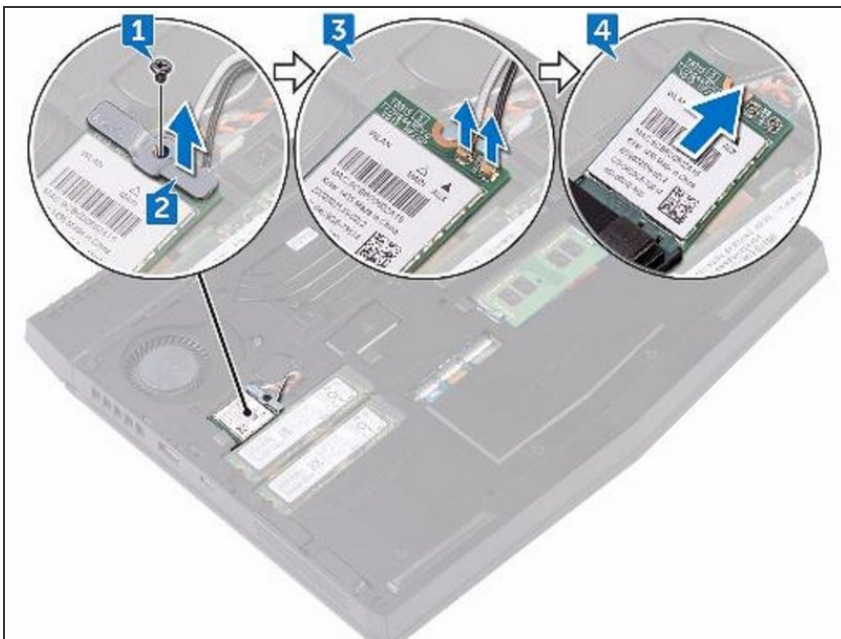- Tighten the five captive screws that secure the base cover to the computer base.

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Step 9 — Align the Notch

⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before Working Inside Your Computer](). After working inside your computer, follow the instructions in [After Working Inside Your Computer]().

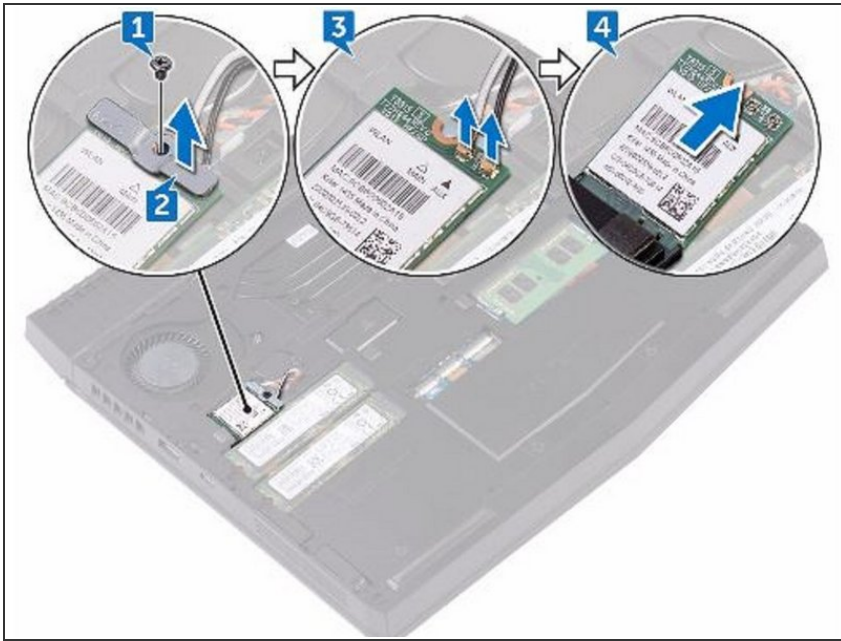⚠ CAUTION: To avoid damaging the wireless card, do not place any cables under it.

● Remove the screw (M2x3) that secures the wireless card and bracket to the computer base.

Step 10 — Lift the Wireless-Card Bracket

● Lift the wireless-card bracket off the wireless card.

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Step 11 — Disconnecting the Antenna Cables

- Disconnect the antenna cables from the wireless card.

Step 12 — Align the Notch

⚠ CAUTION: To avoid damaging the wireless card, do not place any cables under it.

- Align the notch on the wireless card with the tab on the wireless-card slot.

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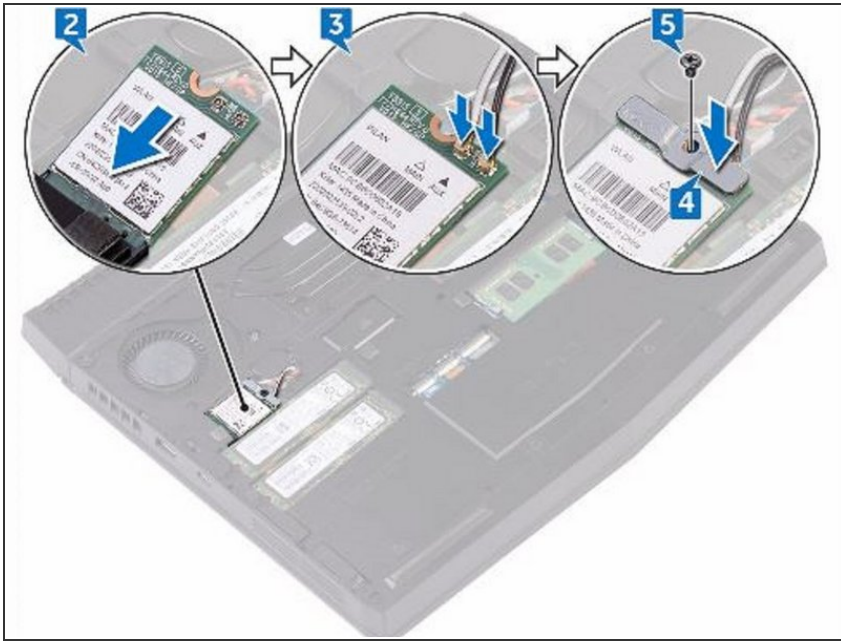
Step 13 — Slide the Wireless Card

- Slide the **NEW** wireless card at an angle into the wireless-card slot.
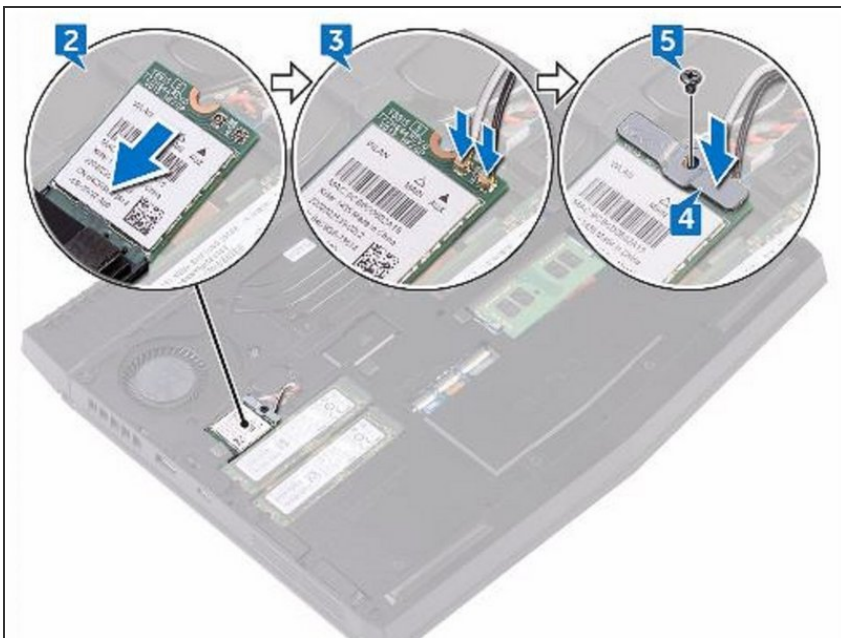
Step 14 — Connect the Antenna Cables

- Connect the antenna cables to the wireless card.

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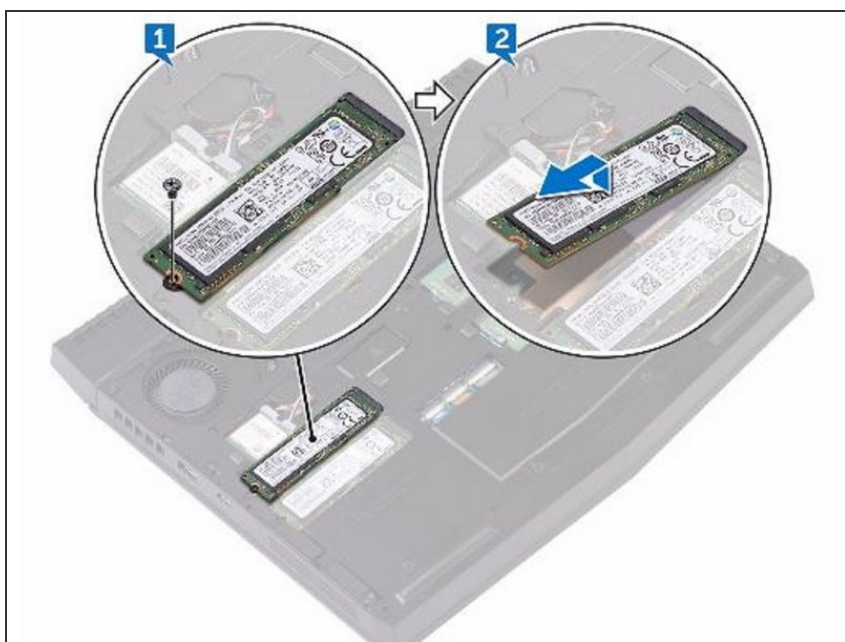## Step 15 — Align the Screw Hole

- Align the screw hole on the wireless-card bracket with the screw hole on the wireless card and the computer base.

Step 16 — Replace the Screw

- Replace the screw (M2x3) that secures the wireless-card bracket to the wireless card and the computer base.

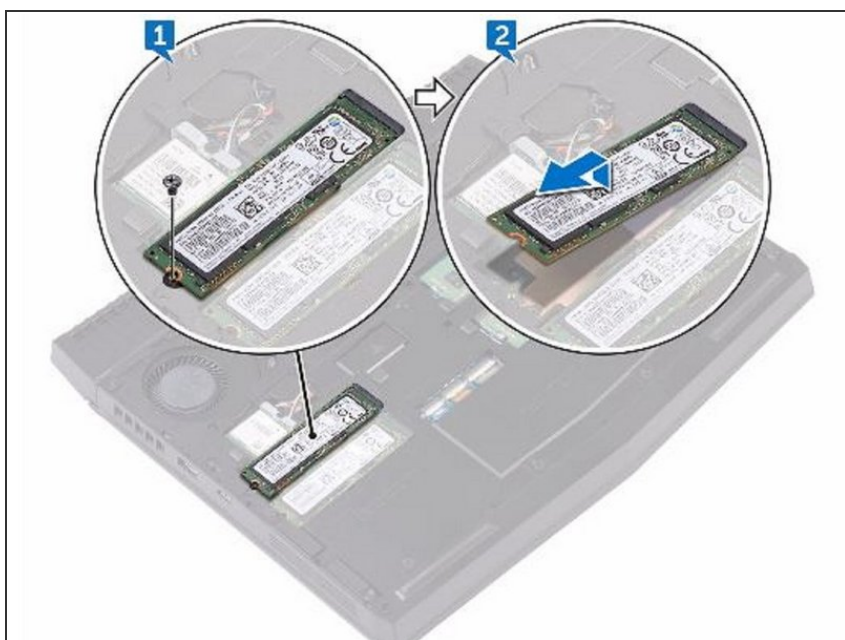This document was generated on 2019-11-02 06:42:53 PM (MST).

Step 17 — Remove the Screw

⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before Working Inside Your Computer](). After working inside your computer, follow the instructions in [After Working Inside Your Computer]().

● Remove the screw (M2x3) that secures the solid-state drive to the computer base.

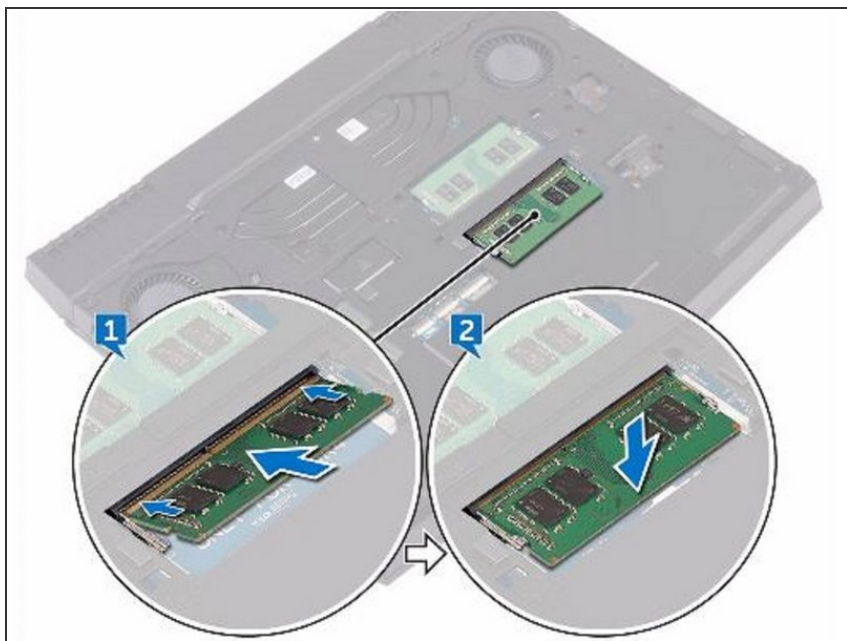## Step 18 — Lift and Slide the Solid-State Drive

● Lift and slide the solid-state drive from the solid-state drive slot.

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Step 19 — Align the Notch

● Align the notch on the **NEW** solid-state drive with the tab on the solid-state drive slot and slide the solid-state drive into the solid-state drive slot.
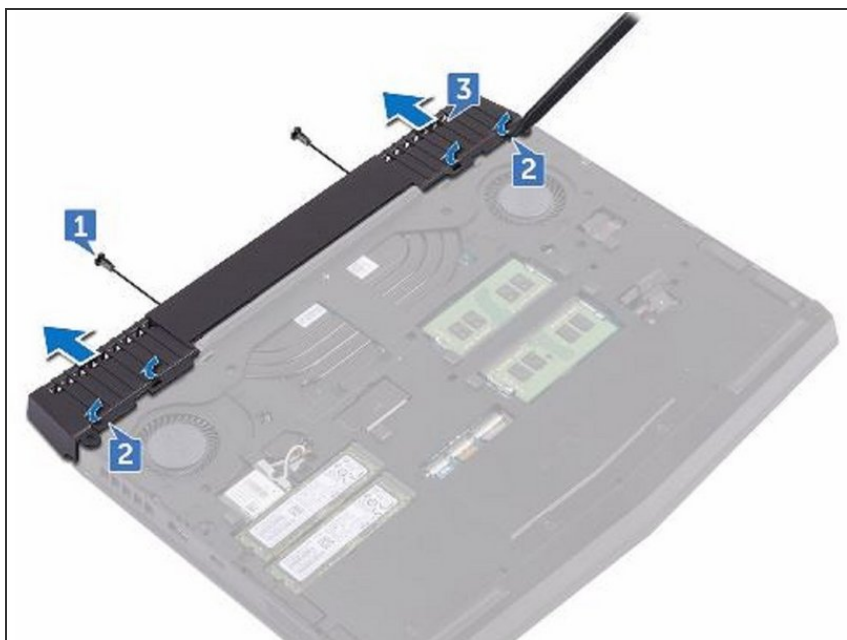
Step 20 — Press the Memory Module

● Press the memory module down until it clicks into place.

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Step 21 — Remove the Screws

- Remove the two screws (M2.5x6L) that secure the rear-I/O cover to the palm-rest assembly.
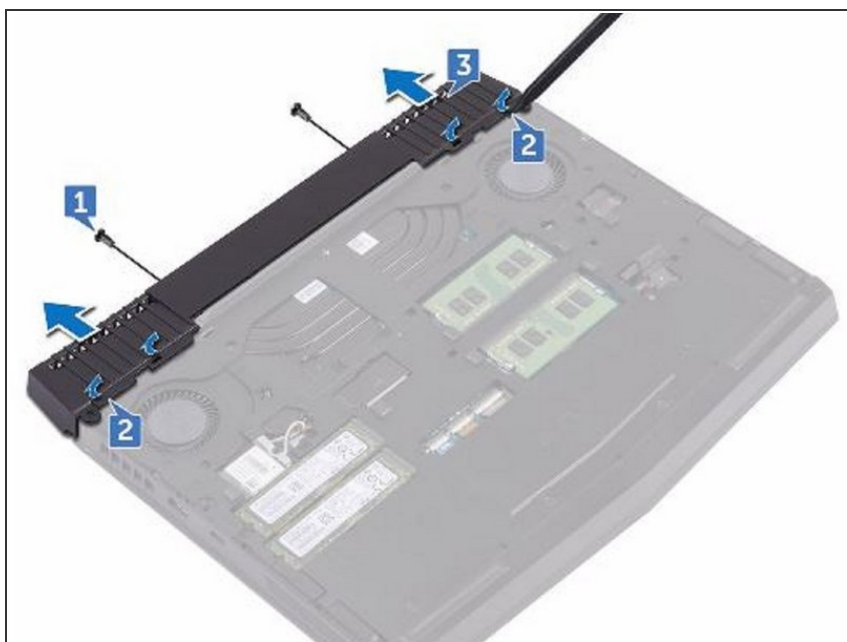
Step 22 — Using a Plastic Scribe

- Using a plastic scribe, gently release the tabs that secure rear-I/O cover to the computer base.

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Step 23 — Removing the Rear-I/O

- Slide and remove the rear-I/O cover from the computer base.
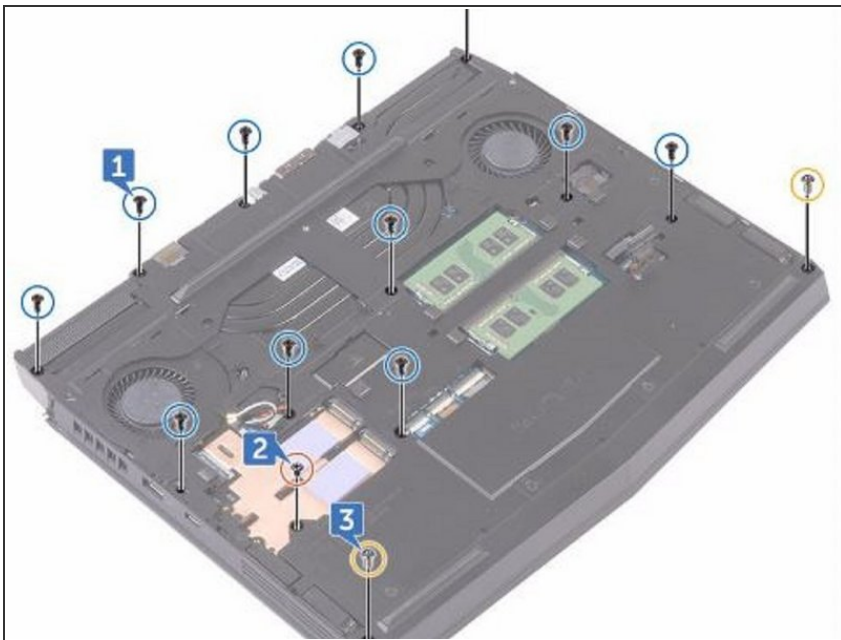
Step 24 — Sliding the Rear-I/O

- Slide the **NEW** rear-I/O cover into the slots on the computer base and snap the rear-I/O cover into place.

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Step 25 — Replace the two Screws

- Replace the two screws (M2.5x6L) that secure the rear-I/O cover to the palm-rest assembly.
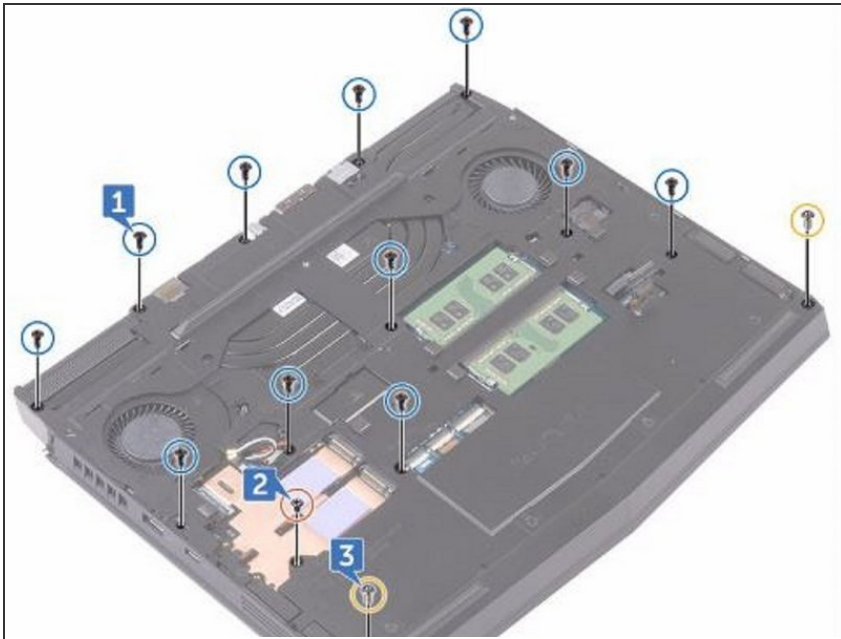
Step 26 — Remove the Screws

⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before Working Inside Your Computer. After working inside your

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computer, follow the instructions in [After Working Inside Your Computer](#).
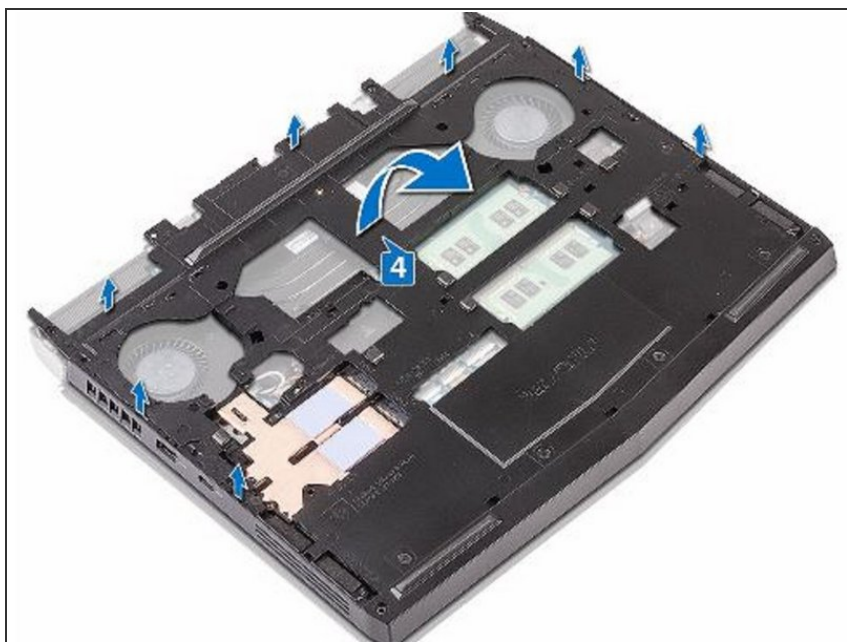
- Remove the eleven (M2.5x6L) screws that secure the computer base to the palm-rest assembly.
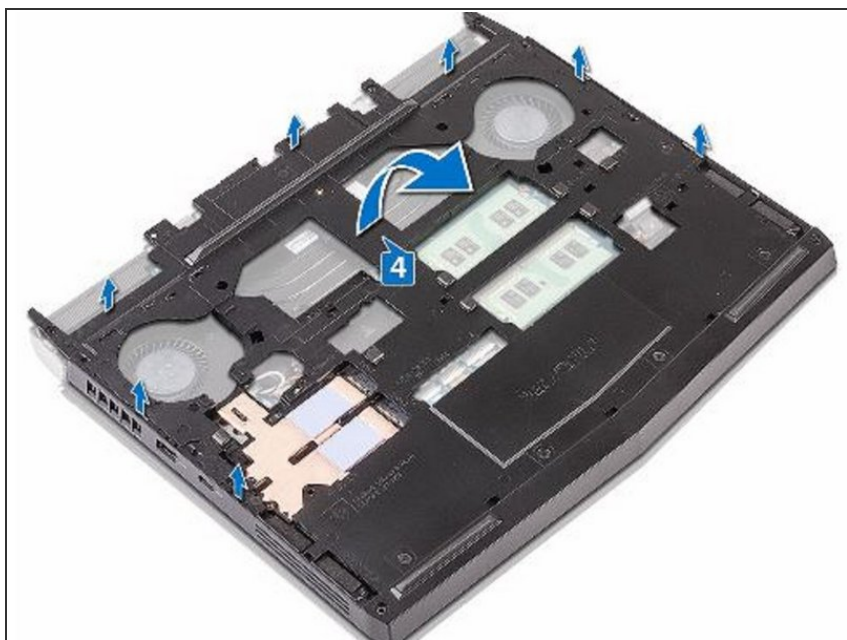
Step 27 — Remove the Screw

- Remove the (M2x3) screw that secures the computer base to the palm-rest assembly.
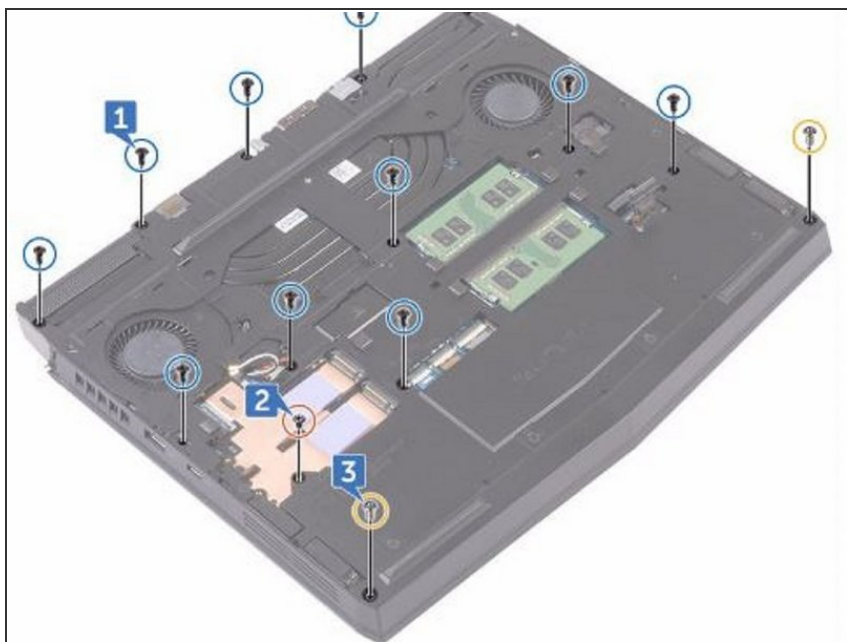
Step 28 — Remove the Two Screws

- Remove the two (M2.5x6L) screws that secure the computer base to the palm-rest assembly.

Step 29 — Lift the Computer Base

- Lift the computer base from the palm-rest assembly.

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Step 30 — Align the Screw Holes

- Align the screw holes on the **NEW** computer base with the screw holes on the palm-rest assembly.

Step 31 — Replace the Screws

- Replace the two (M2.5x6L) screws that secure the computer base to the palm-rest assembly.

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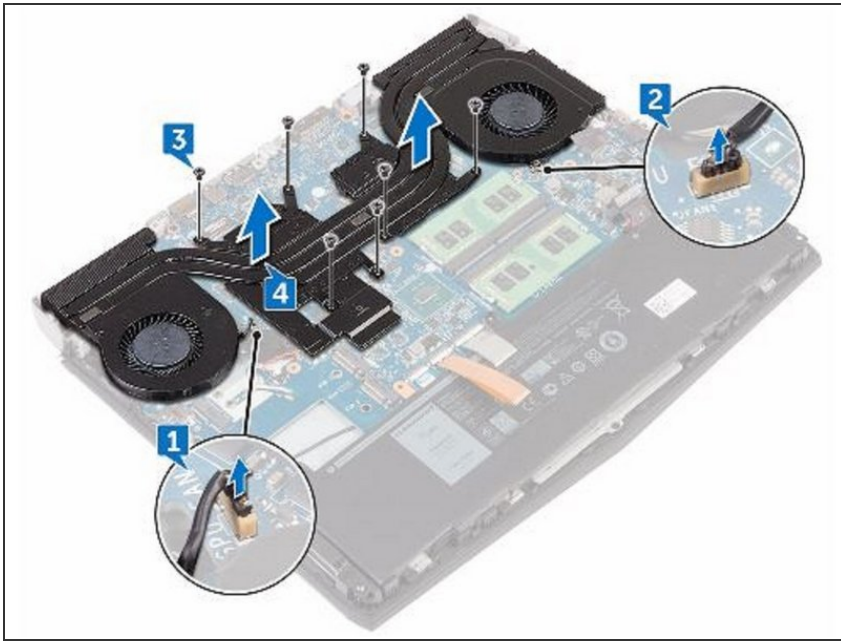
Step 32 — Replace the Screw

- Replace the (M2x3) screw that secures the computer base to the palm-rest assembly.

Step 33 — Replace the Eleven Screws

- Replace the eleven (M2.5x6L) screws that secure the computer base to the palm-rest assembly.
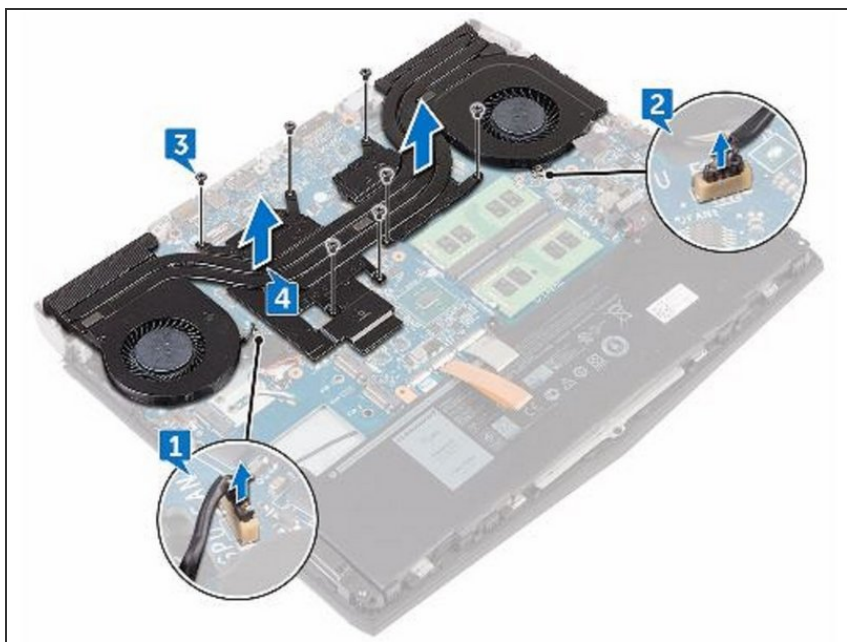
Step 34 — Disconnect the Left-Fan Cable

⚠️ WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before Working Inside Your Computer. After working inside your computer, follow the instructions in After Working Inside Your Computer.

⚠️ WARNING: The heat sink may become hot during normal operation. Allow sufficient time for the heat sink to cool before you touch it.

⚠️ CAUTION: For maximum cooling of the processor, do not touch the heat transfer areas on the heat sink. The oils in your skin can reduce the heat transfer capability of the thermal grease.
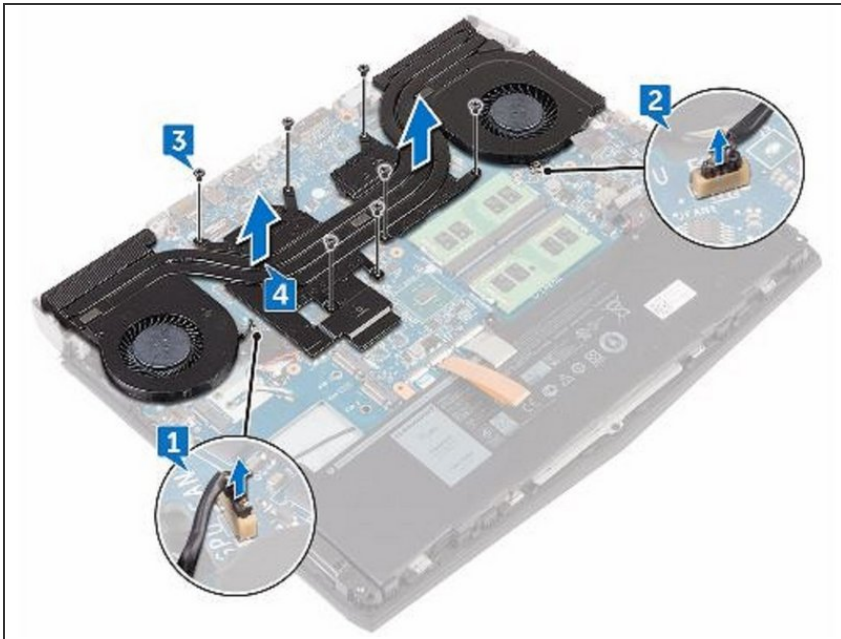
● Disconnect the left-fan cable from the system board.

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Step 35 — Disconnecting the Right-Fan Cable

- Disconnect the right-fan cable from the system board.
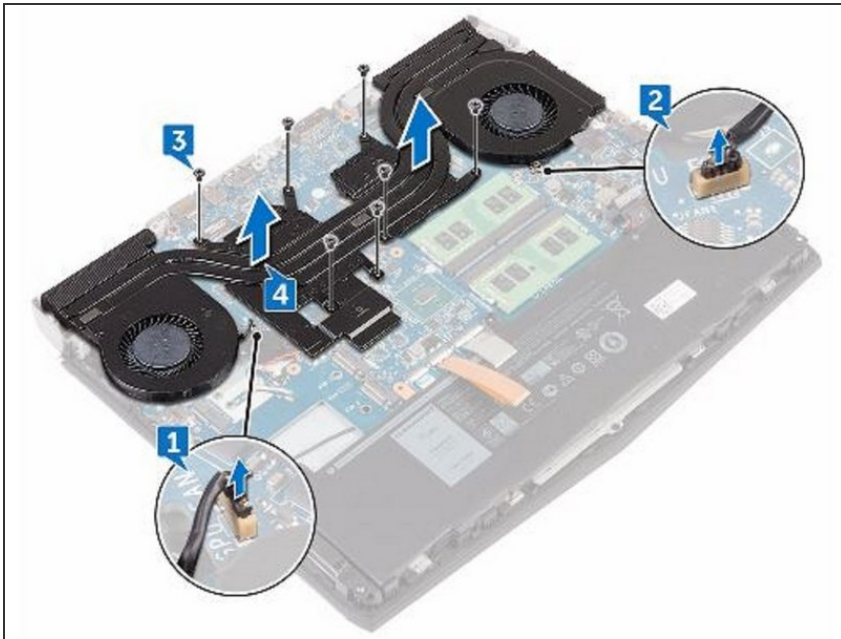
Step 36 — Remove the Seven Screws

- In sequential order (as indicated on the heat-sink assembly), remove the seven screws (M2x3) that secure the heat-sink assembly to the system board.

Step 37 — Lifiting the Heat-Sink Assembly

- Lift the heat-sink assembly off the system board.

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Step 38 — Align the Screw Holes

⚠️ CAUTION: Incorrect alignment of the heat sink can damage the system board and processor.

ⓘ NOTE: The original thermal grease can be reused if the original system board and fan are reinstalled together. If either the system board or the fan is replaced, use the thermal pad provided in the kit to ensure that thermal conductivity is achieved.

● Align the screw holes on the **NEW** heat-sink assembly with the screw holes on the system board.

Step 39 — Replace the Screws

● In sequential order (indicated on the heat-sink assembly), replace the seven screws (M2x3) that secure the heat-sink assembly to the system board.

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Step 40 — Connecting the Right-Fan Cable

- Connect the right-fan cable to the respective connector on the system board.

Step 41 — Connecting the Left-Fan Cable

- Connect the left-fan cable to the respective connector on the system board.

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

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