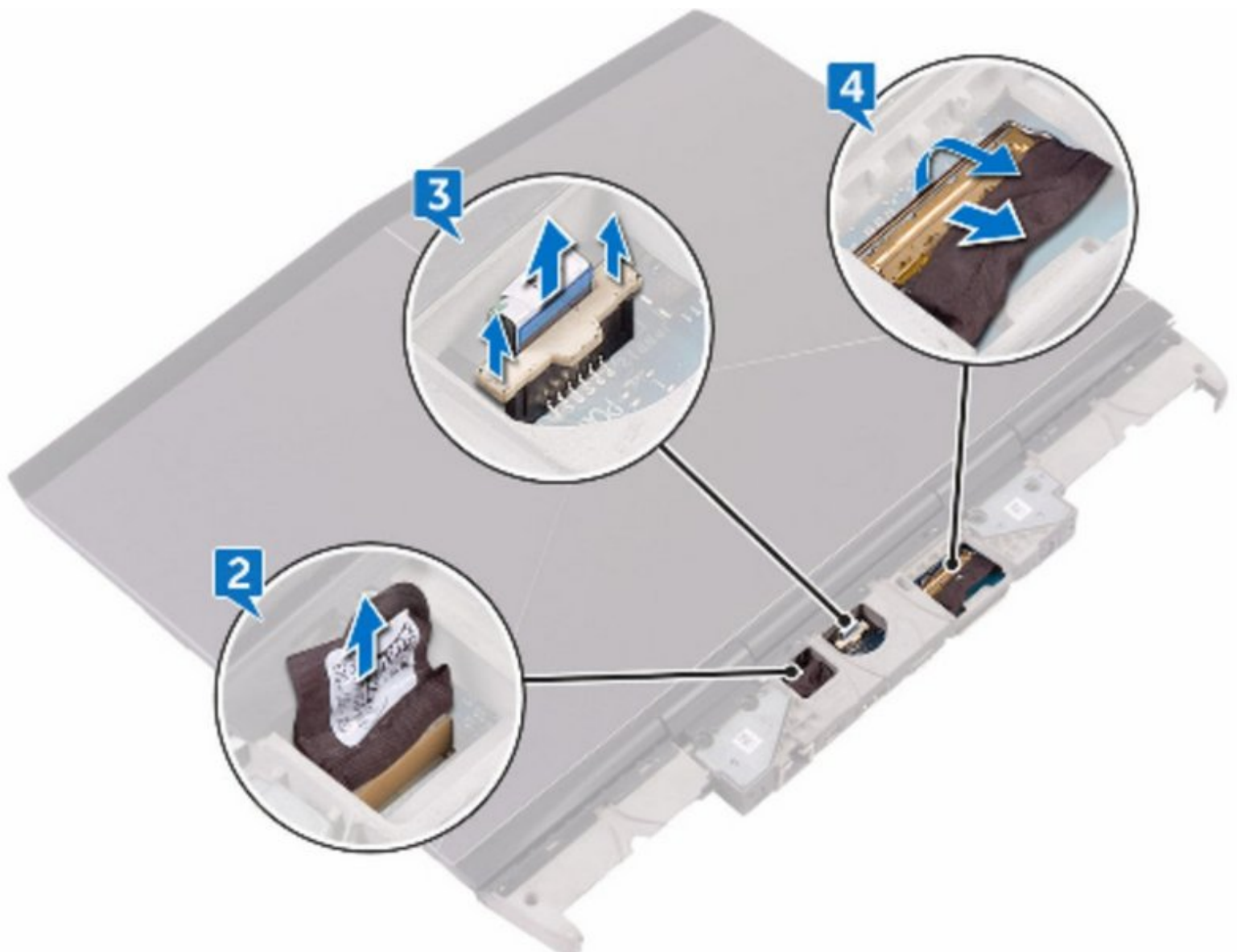




Dell Alienware 13 R3 System Board Replacement

In this guide, we will show you how to remove and replace the System Board.

Written By: Terrence15



INTRODUCTION

In this guide, we will show you how to remove and replace the System Board.



TOOLS:

- [Pro Tech Toolkit](#) (1)
-

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](#).

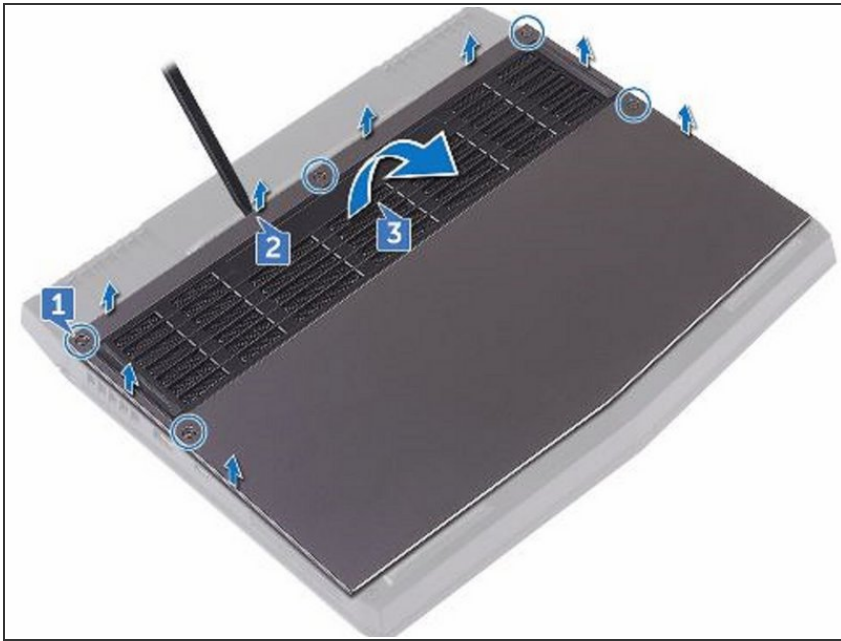
- Loosen the five captive screws that secure the base cover to the computer base.

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.

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.

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.

Step 7 — Slide the Tabs



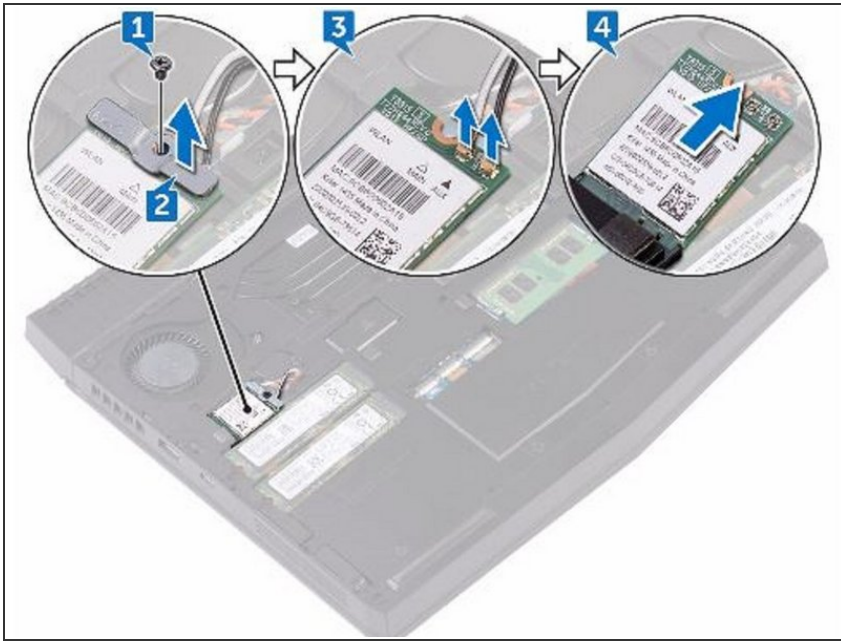
- Slide the tabs on the **NEW** base cover into the slots on the computer base and snap the base cover into place

Step 8 — Tighten the Five Captive Screws



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

Step 9 — Align the Notch

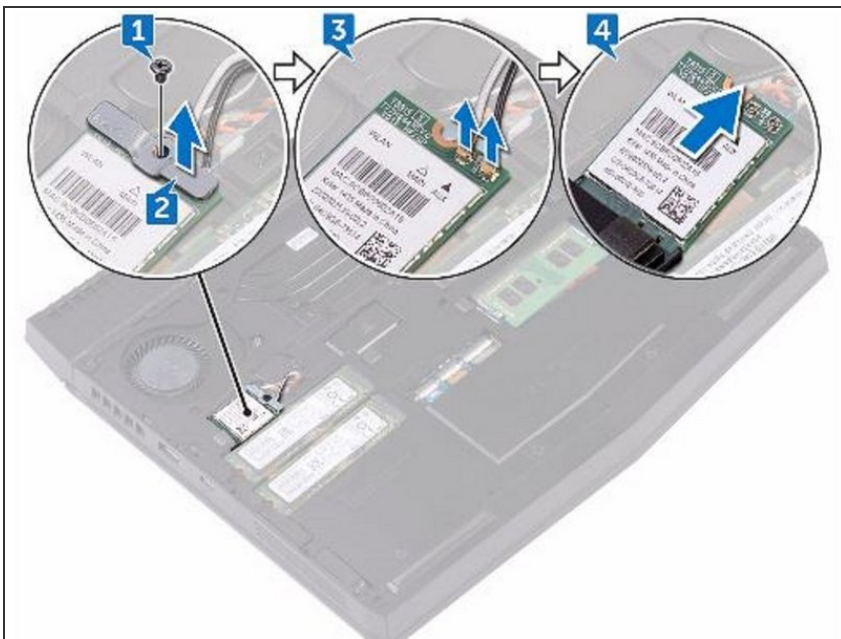


⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before Working Inside Your Computer](#). After working inside your computer, follow the instructions in [After Working Inside Your Computer](#).

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

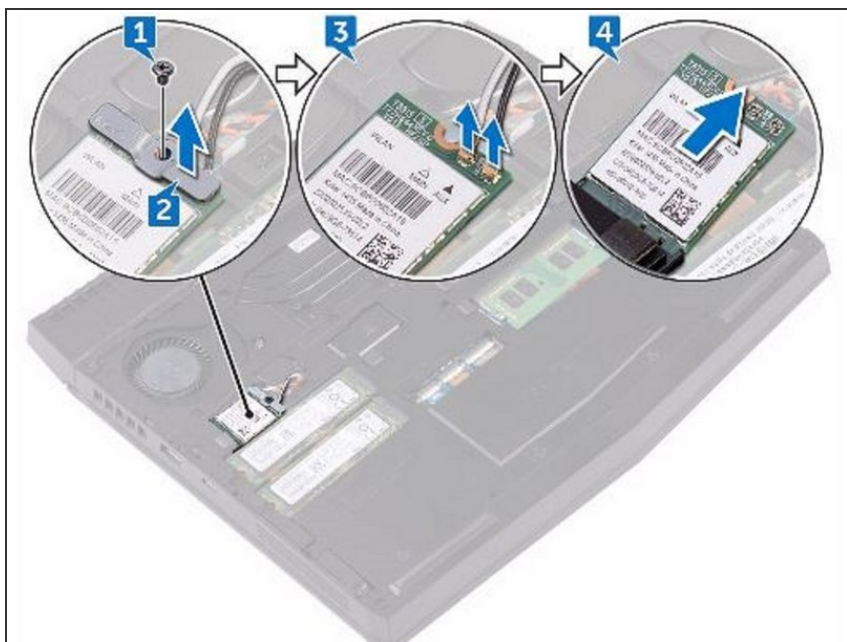
- Remove the screw (M2x3) that secures the wireless card and bracket to the computer base.

Step 10 — Lift the Wireless-Card Bracket



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

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.

Step 13 — Slide the Wireless Card



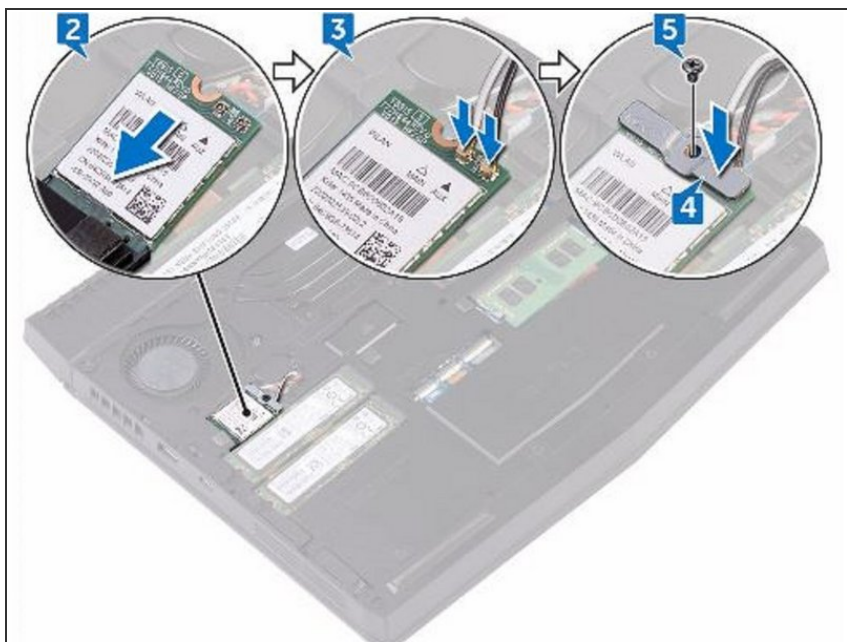
- Slide the **NEW** wireless card at an angle into the wireless-card slot.

Step 14 — Connect the Antenna Cables



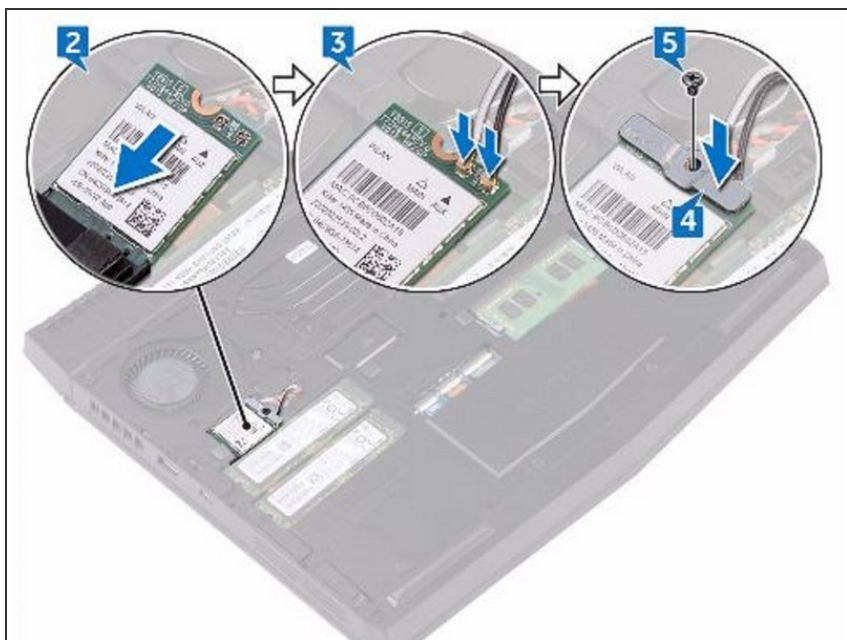
- Connect the antenna cables to the wireless card.

Step 15 — Align the Screw Hole



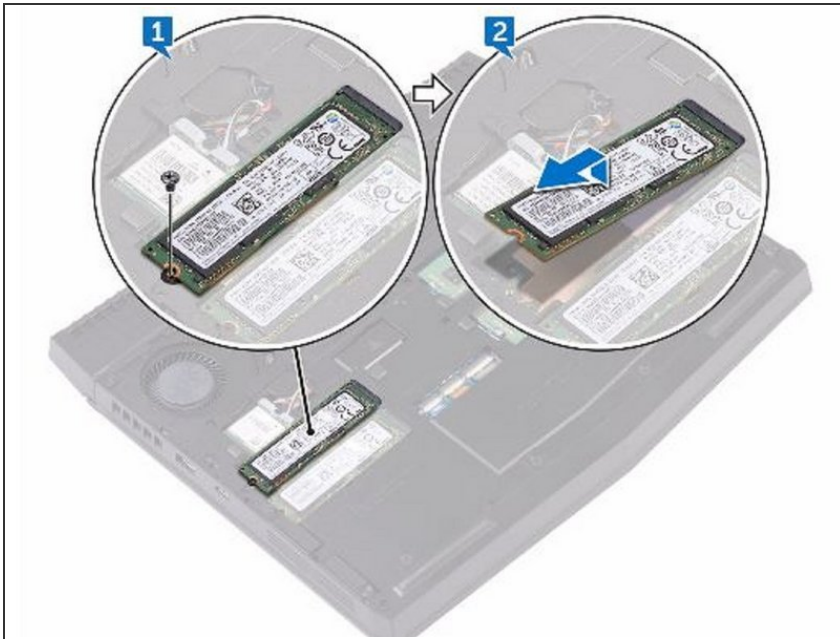
- Align the screw hole on the wireless-card bracket with the screw hole on the wireless card and the computer base.

Step 16 — Replace the Screw



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

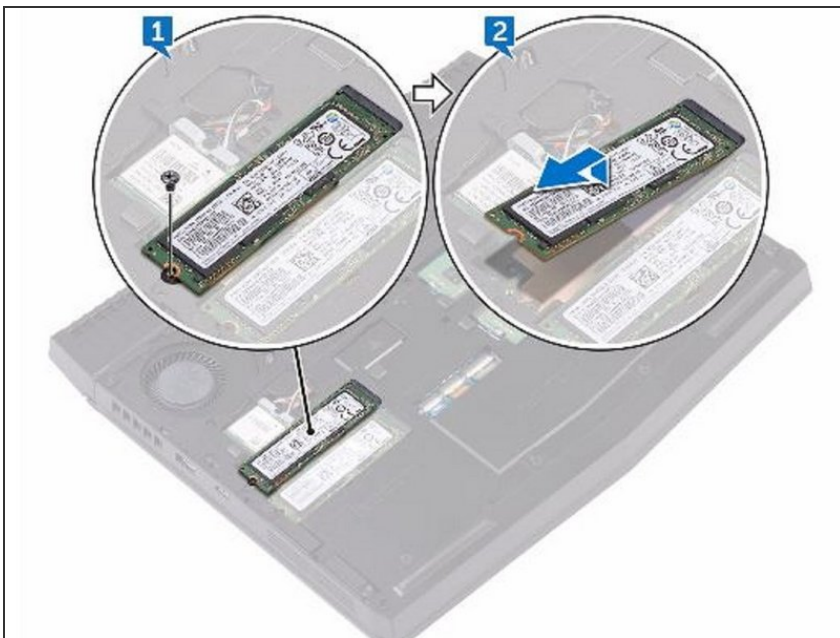
Step 17 — Remove the Screw



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

Step 18 — Lift and Slide the Solid-State Drive



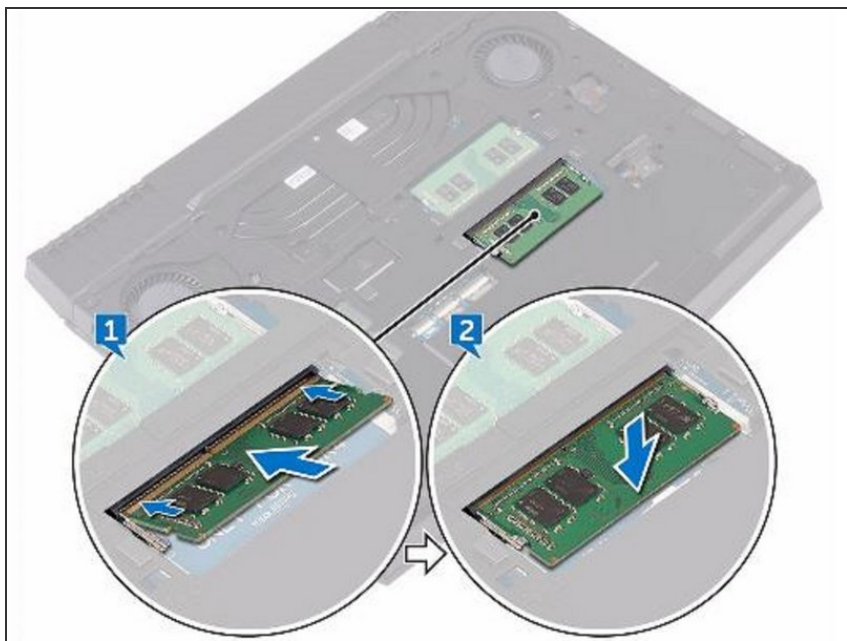
- Lift and slide the solid-state drive from the solid-state drive slot.

Step 19 — Align the Notch



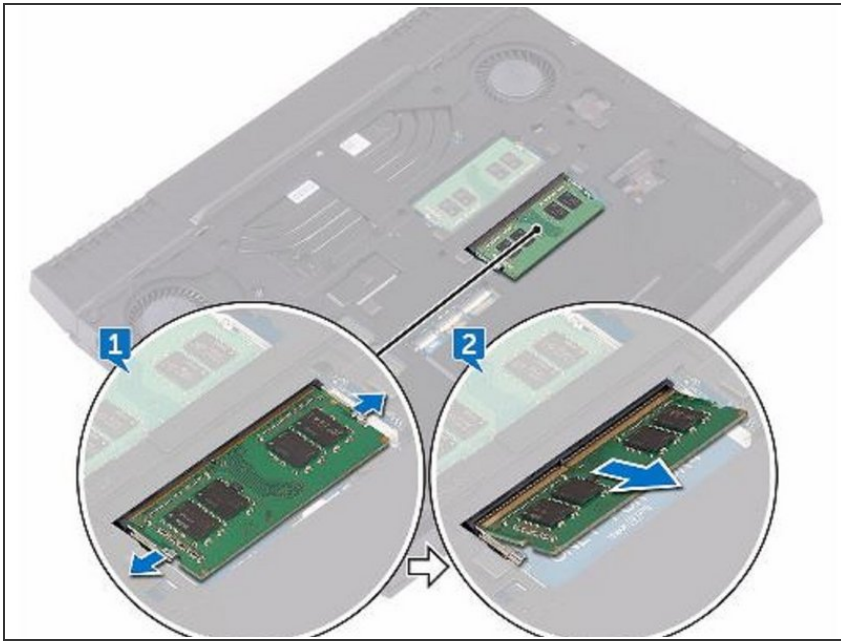
- Align the notch on the **NEW** solid-state drive with the tab on the solid-state drive slot and slide the solid-state drive into the solid-state drive slot.

Step 20 — Press the Memory Module



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

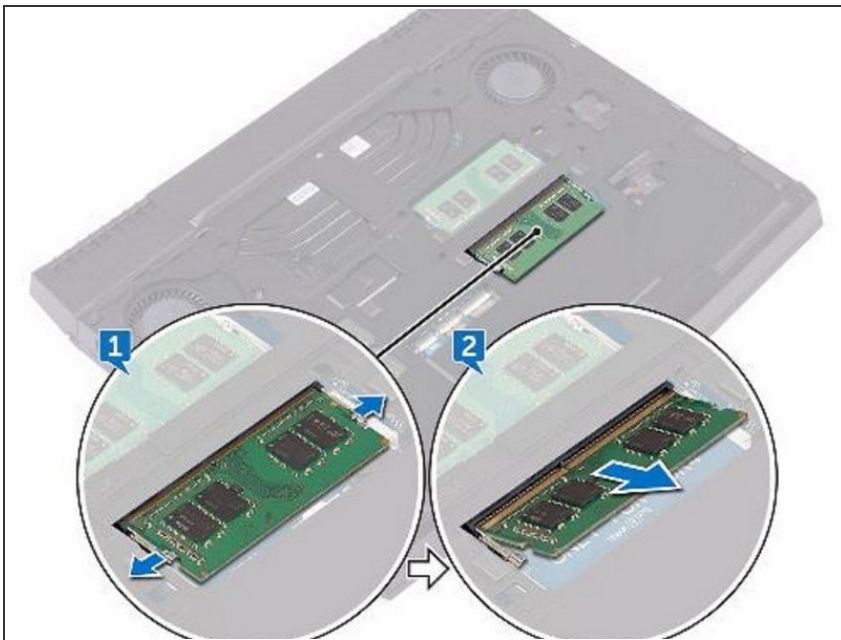
Step 21 — Popping up the Memory Module



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- Using your fingertips, carefully spread apart the securing clips on each end of the memory-module slot until the memory module pops up.

Step 22 — Remove the Memory Module



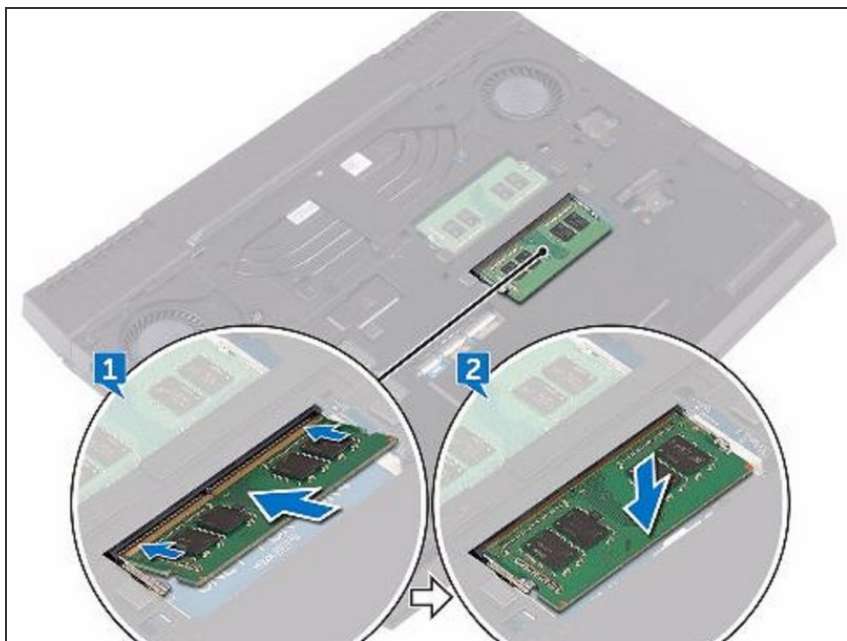
- Slide and remove the memory module from the memory-module slot.

Step 23 — Align the Notch



- Align the notch on the **NEW** memory module with the tab on the memory-module slot and slide the memory module firmly into the slot at an angle.

Step 24 — Press the Memory Module Down



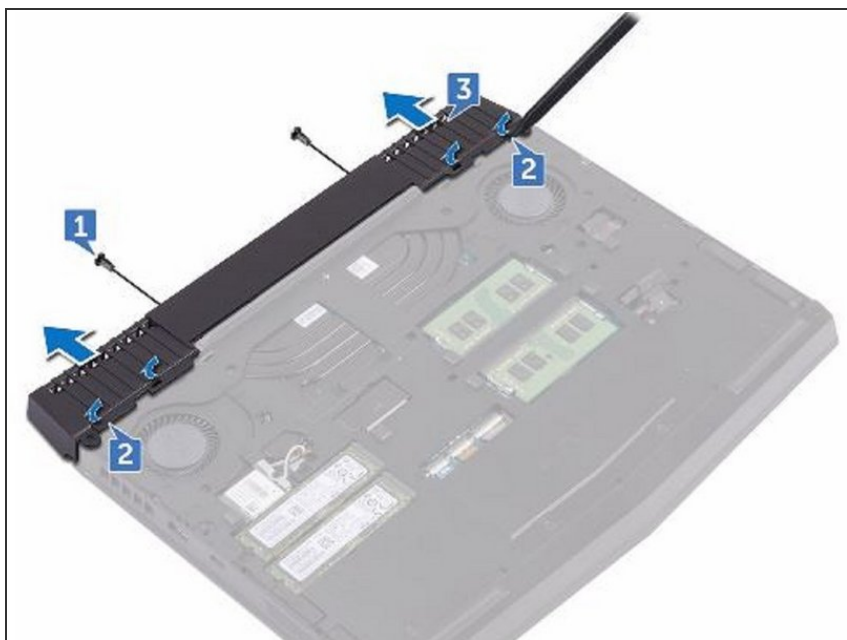
- Press the memory module down until it clicks into place.

Step 25 — Remove the Screws



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

Step 26 — Using a Plastic Scribe



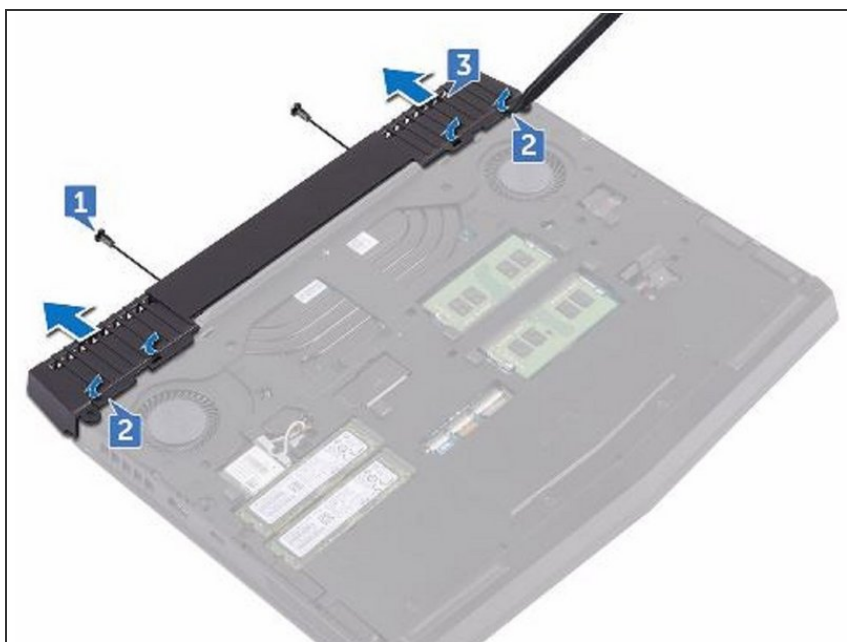
- Using a plastic scribe, gently release the tabs that secure rear-I/O cover to the computer base.

Step 27 — Removing the Rear-I/O



- Slide and remove the rear-I/O cover from the computer base.

Step 28 — Sliding the Rear-I/O



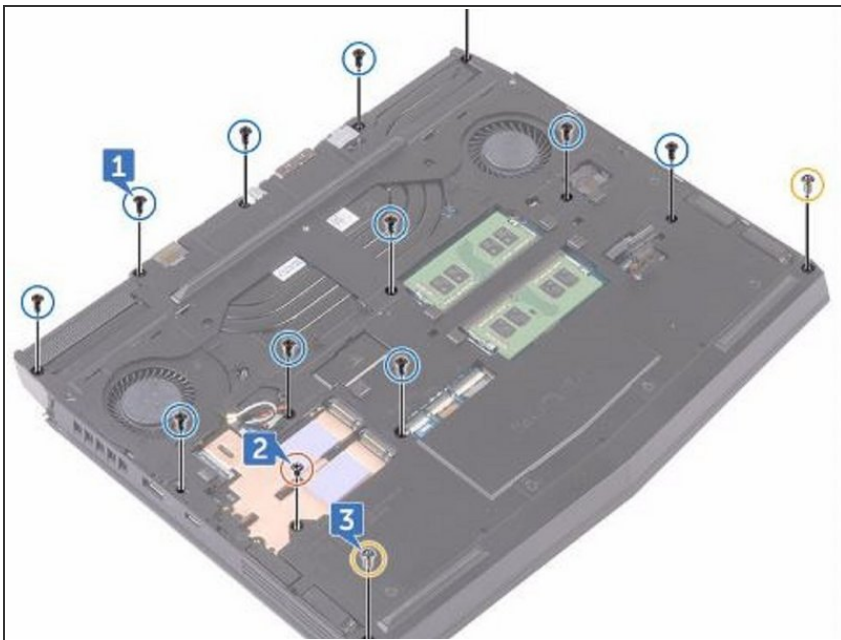
- Slide the **NEW** rear-I/O cover into the slots on the computer base and snap the rear-I/O cover into place.

Step 29 — Replace the two Screws



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

Step 30 — Remove the Screws

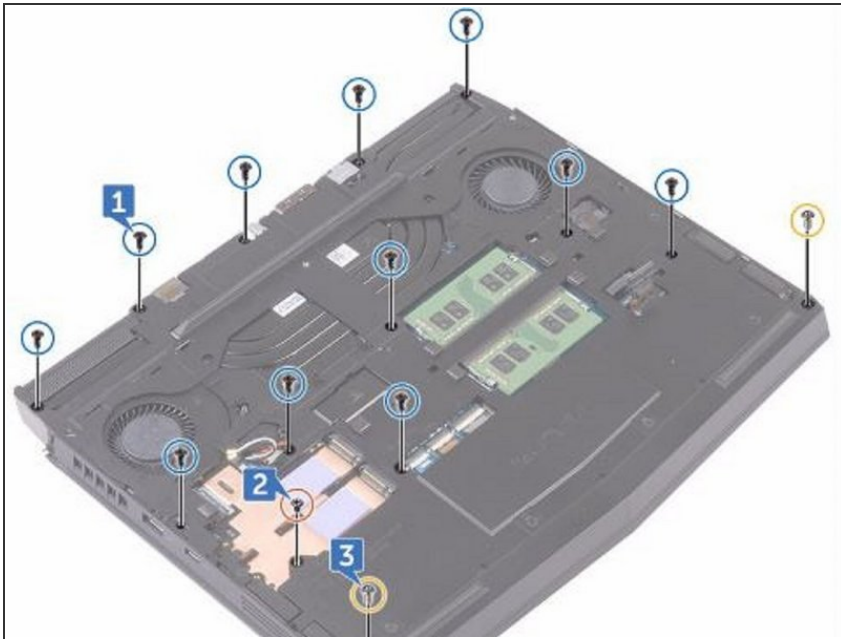


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computer, follow the instructions in [After Working Inside Your Computer](#).

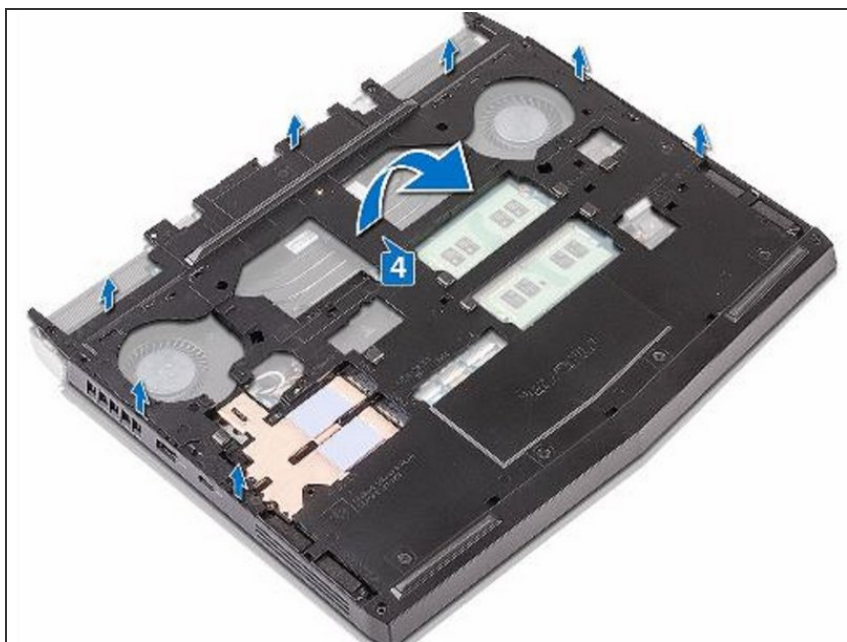
- Remove the eleven (M2.5x6L) screws that secure the computer base to the palm-rest assembly.

Step 31 — Remove the Screw



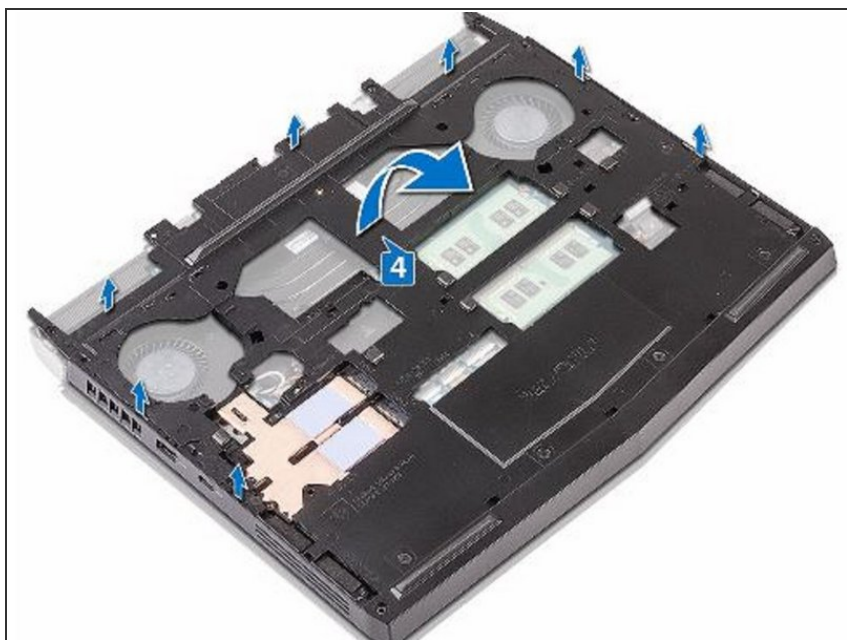
- Remove the (M2x3) screw that secures the computer base to the palm-rest assembly.

Step 32 — Remove the Two Screws



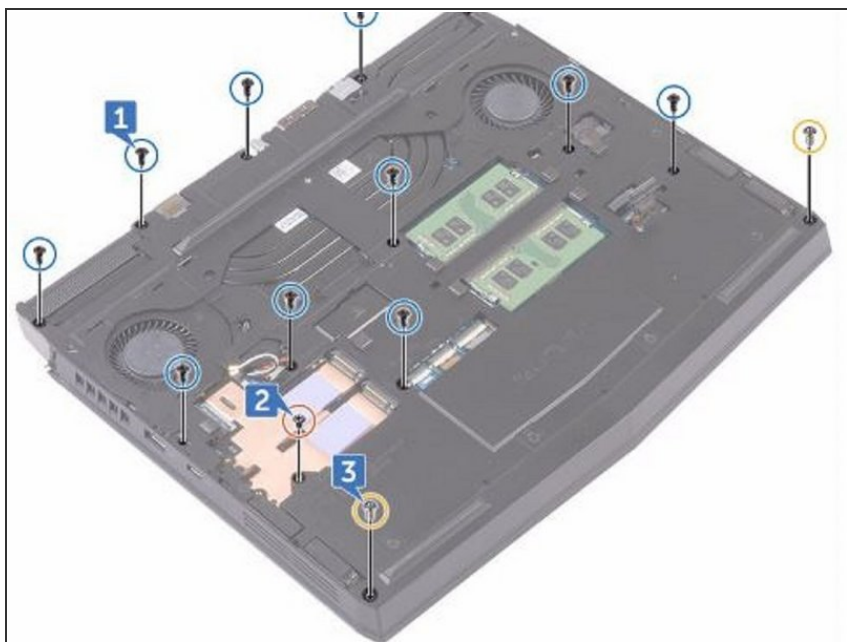
- Remove the two (M2.5x6L) screws that secure the computer base to the palm-rest assembly.

Step 33 — Lift the Computer Base



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

Step 34 — Align the Screw Holes



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

Step 35 — Replace the Screws



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

Step 36 — Replace the Screw



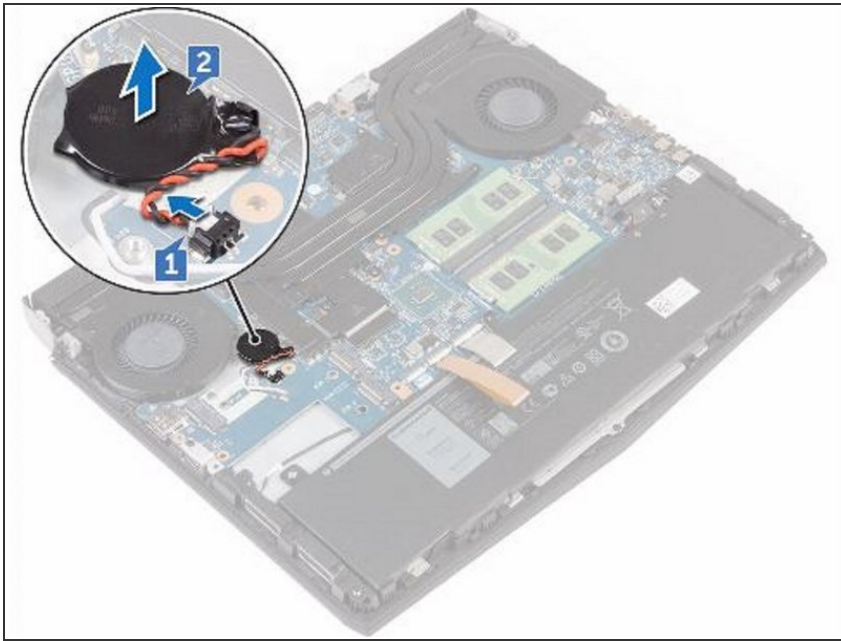
- Replace the (M2x3) screw that secures the computer base to the palm-rest assembly.

Step 37 — Replace the Eleven Screws



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

Step 38 — Disconnecting the Coin-Cell Battery

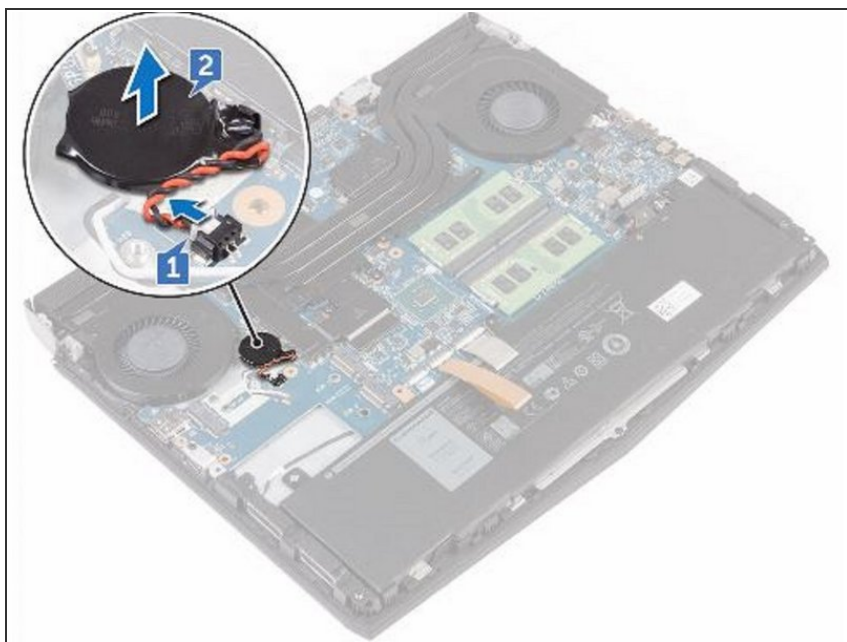


⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before Working Inside Your Computer](#). After working inside your computer, follow the instructions in [After Working Inside Your Computer](#).

⚠ CAUTION: Removing the coin-cell battery resets the BIOS setup program's settings to default. It is recommended that you note the BIOS setup program's settings before removing the coin-cell battery.

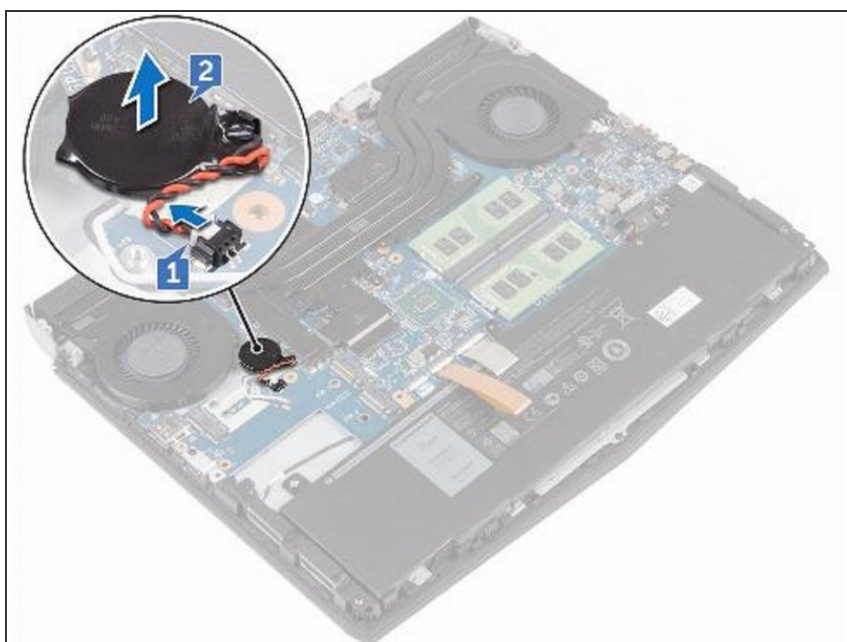
- Disconnect the coin-cell battery cable from the system board.

Step 39 — Peeling the Coin-Cell Battery



- Gently peel off the coin-cell battery along with its cable off the palm-rest assembly.

Step 40 — Adhere the Coin-Cell Battery



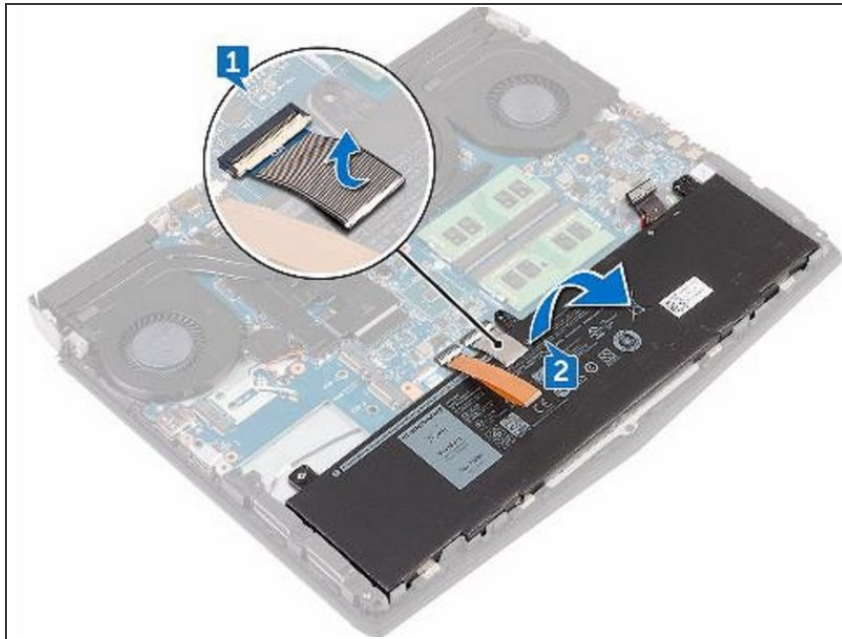
- Adhere the **NEW** coin-cell battery to the palm-rest assembly.

Step 41 — Connect the Coin-Cell Battery



- Connect the coin-cell battery cable to the system board.

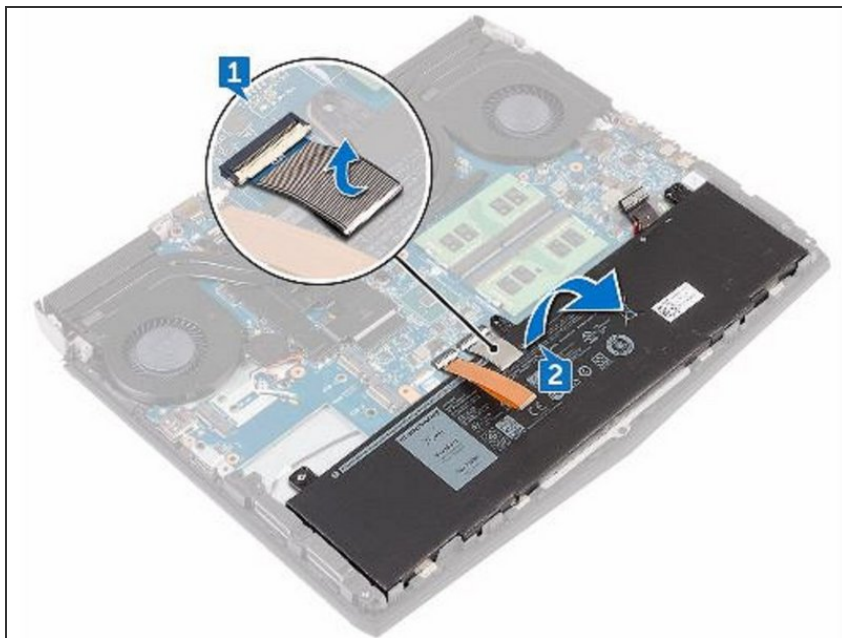
Step 42 — Peeling the Keyboard Connector



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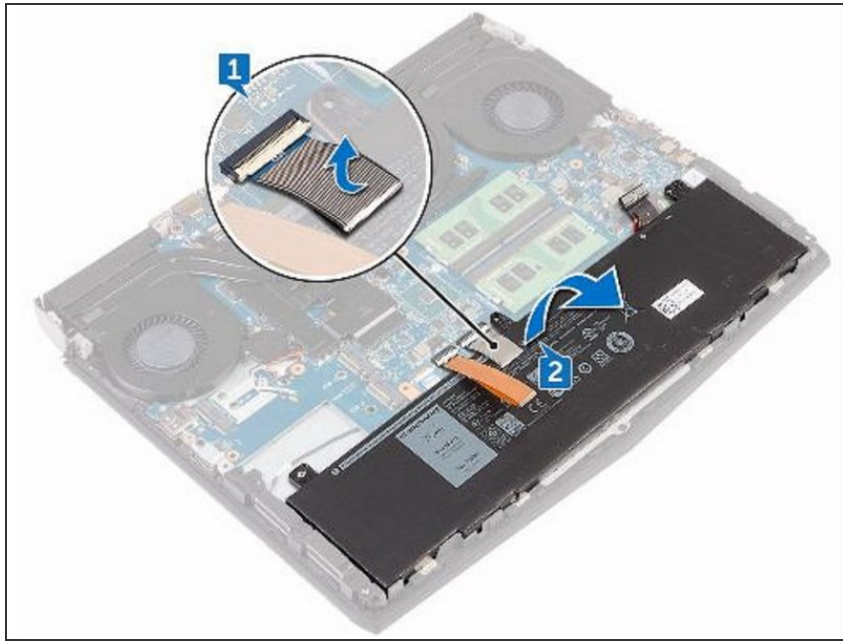
- Peel off the keyboard connector from the battery.

Step 43 — Lifting the Battery



- Lift the battery off the palm-rest assembly.

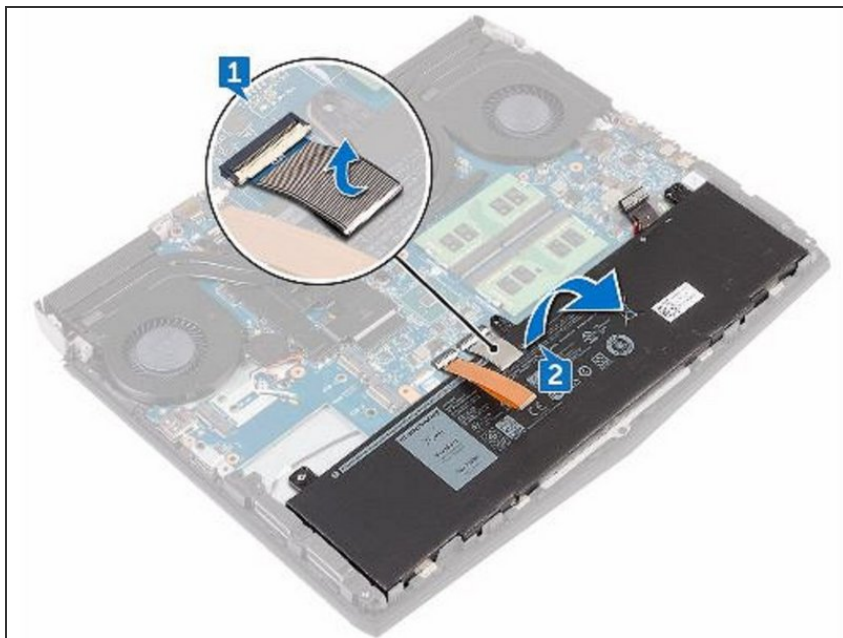
Step 44 — Placing the New Battery



CAUTION: Ensure the keyboard and keyboard-backlit cables are not under the battery.

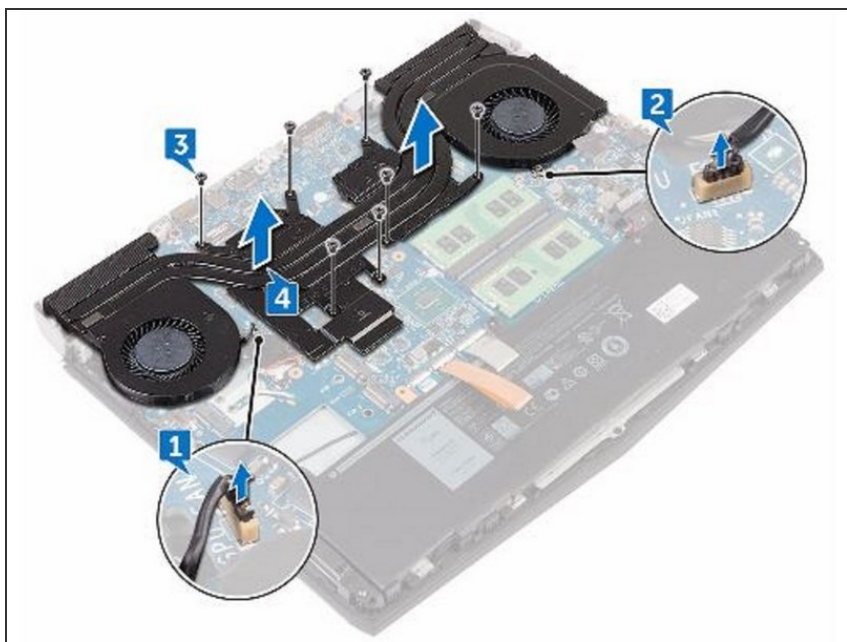
- Using the alignment post, place the **NEW** battery on the palm-rest assembly.

Step 45 — Adhering the Keyboard



- Adhere the keyboard connector that secures the battery to the palm-rest assembly.

Step 46 — Disconnect the Left-Fan Cable



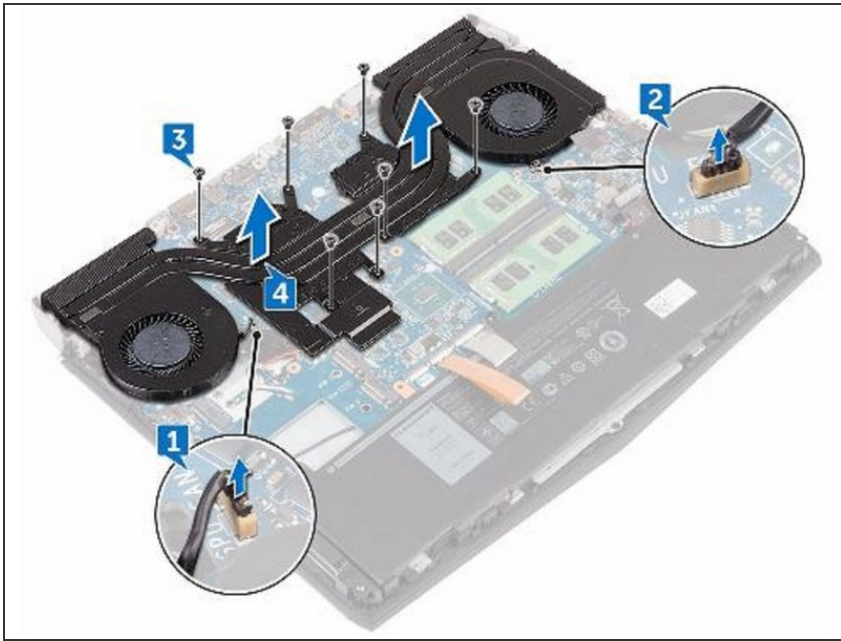
⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before Working Inside Your Computer](#). After working inside your computer, follow the instructions in [After Working Inside Your Computer](#).

⚠ 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.

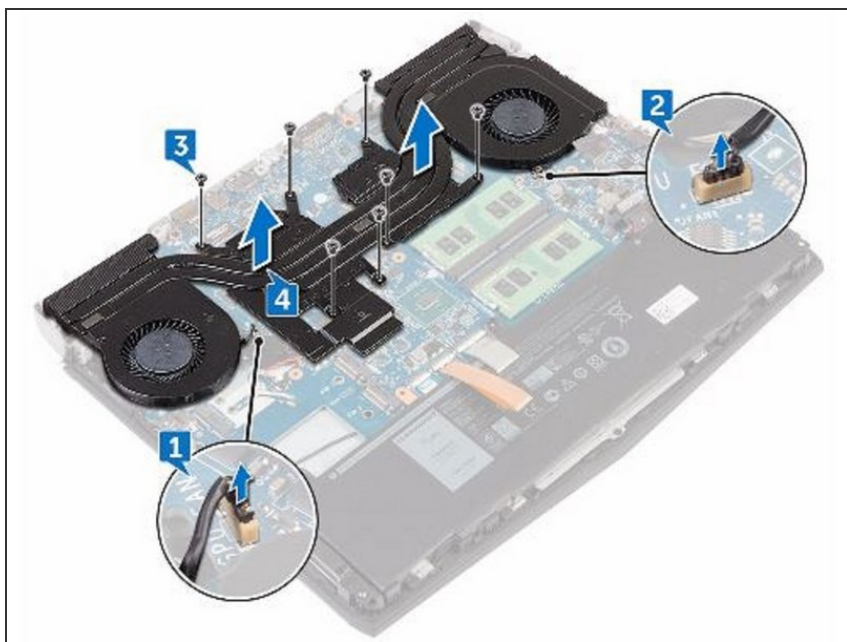
- Disconnect the left-fan cable from the system board.

Step 47 — Disconnecting the Right-Fan Cable



- Disconnect the right-fan cable from the system board.

Step 48 — Remove the Seven Screws



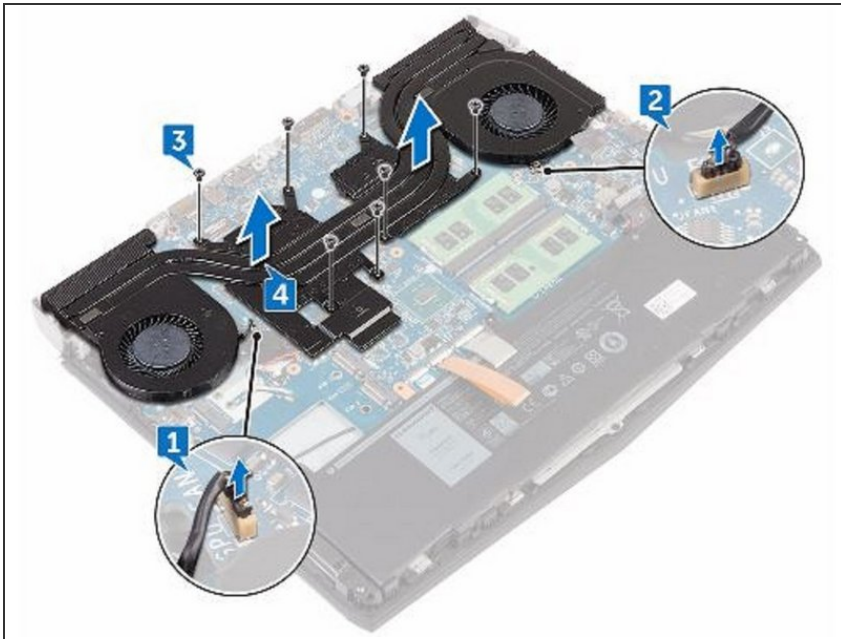
- In sequential order (as indicated on the heat-sink assembly), remove the seven screws (M2x3) that secure the heat-sink assembly to the system board.

Step 49 — Lifting the Heat-Sink Assembly



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

Step 50 — Align the Screw Holes



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

ℹ 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 51 — 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.

Step 52 — Connecting the Right-Fan Cable



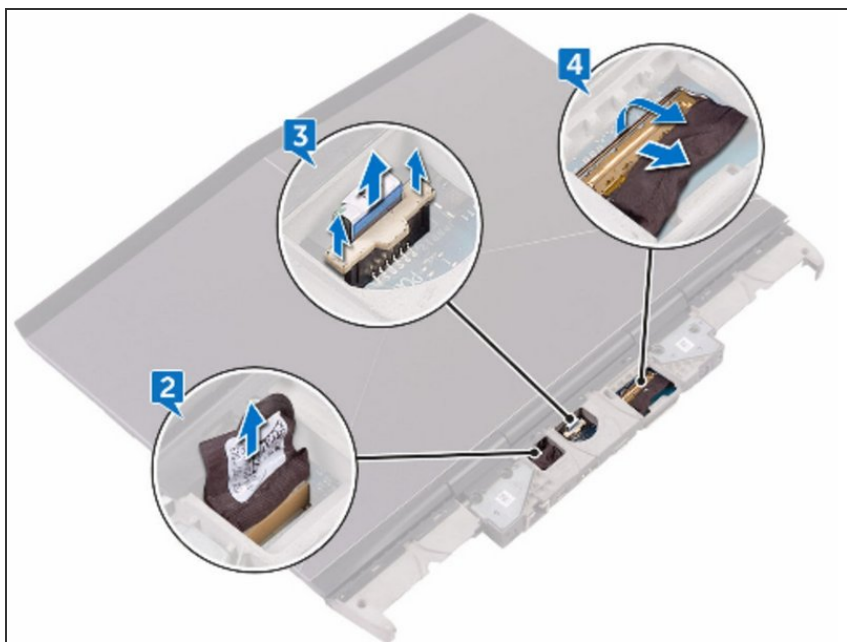
- Connect the right-fan cable to the respective connector on the system board.

Step 53 — Connecting the Left-Fan Cable



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

Step 54 — Turn the Computer Over



⚠ 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](#).

i NOTE: Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.

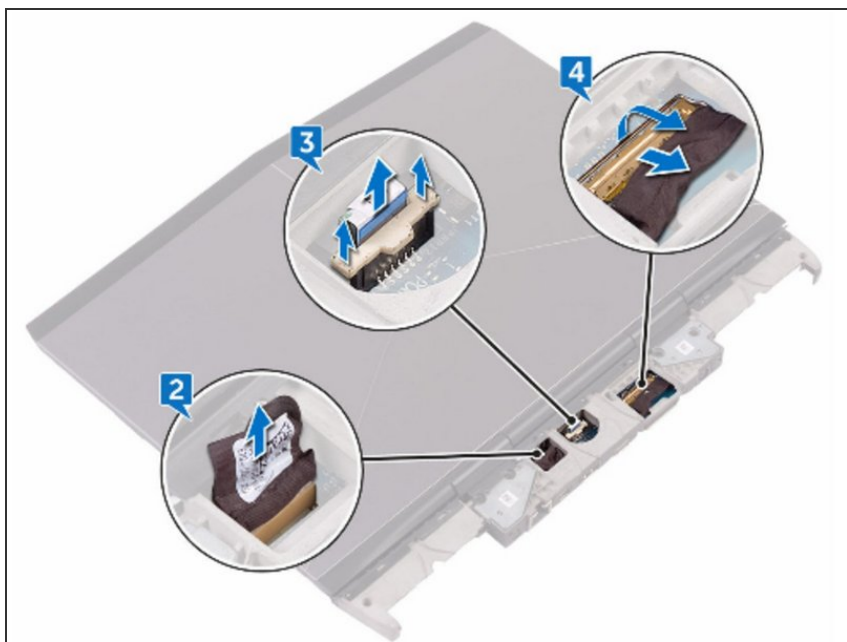
i NOTE: Replacing the system board removes any changes you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.

i NOTE: Before disconnecting the cables from the system board, note the location of the connectors so that you can reconnect the cables correctly after you replace the system board.

⚠ CAUTION: Place the computer on a clean, flat surface.

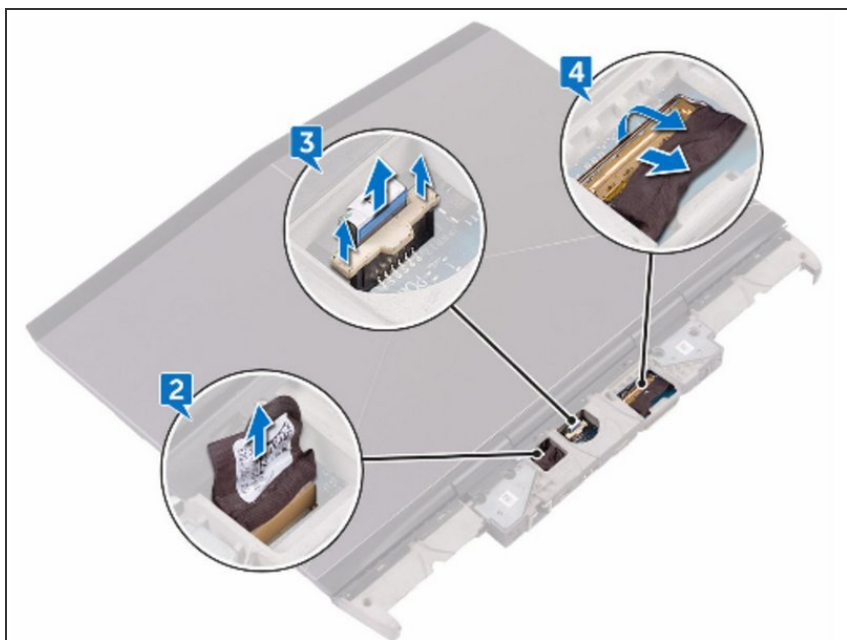
- Turn the computer over.

Step 55 — Disconnecting the Logo-Board Cable



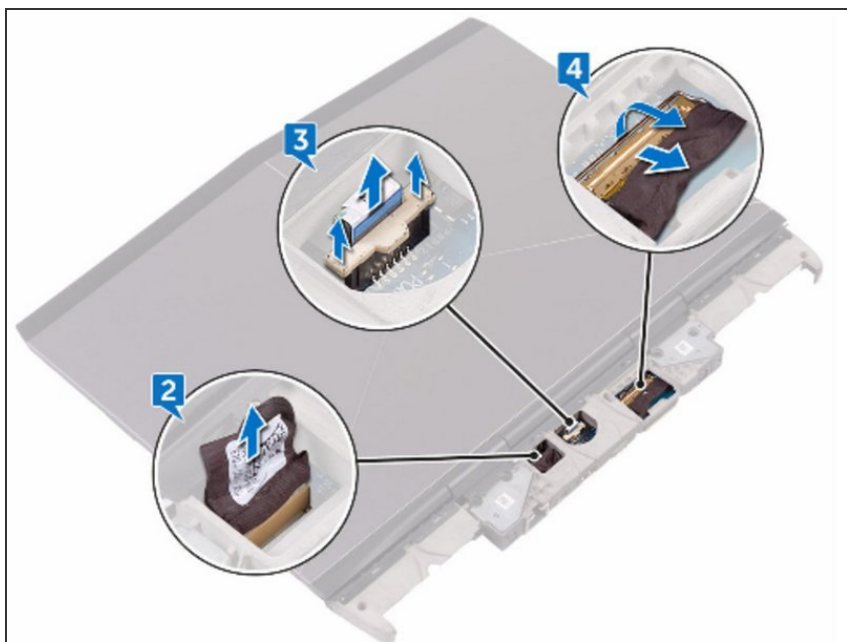
- Disconnect the logo-board cable from the system board.

Step 56 — Disconnecting the Power-Button Board Cable



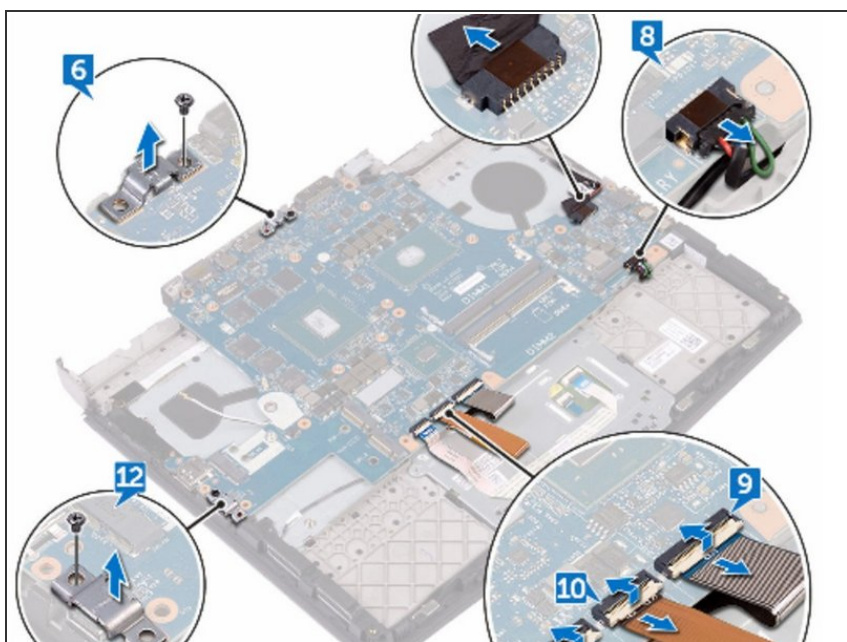
- Using the pull-tab, disconnect the power-button board cable from the system board.

Step 57 — Open the Latch



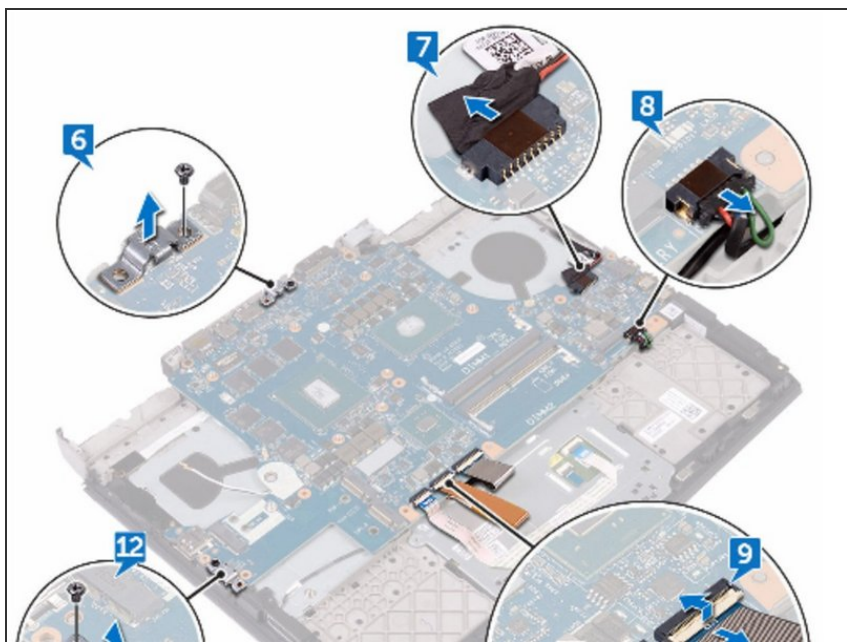
- Open the latch and disconnect the display cable from the system board.

Step 58 — Turn the Computer Over



- Turn the computer over.

Step 59 — Remove the Screw



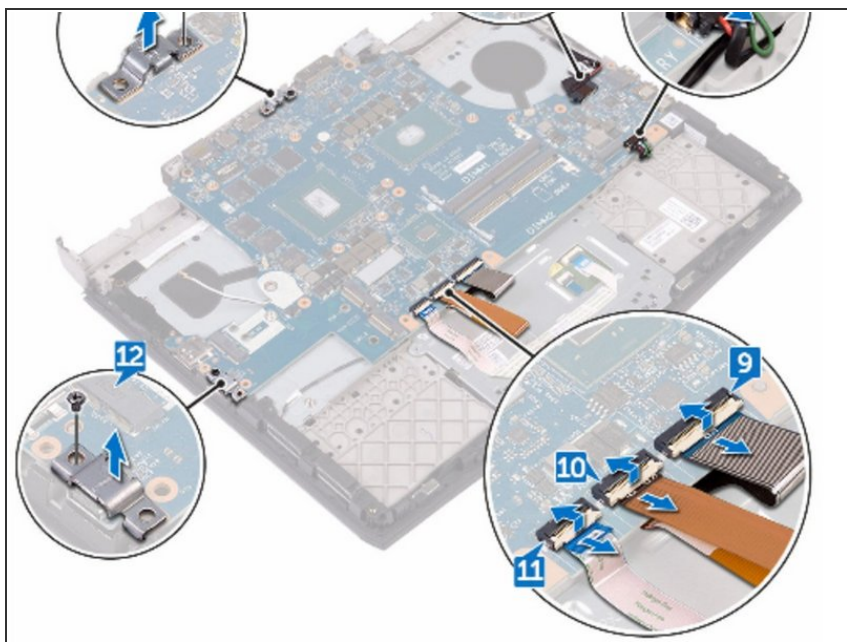
- Remove the screw (M2.5x6L) that secures the USB Type-C port bracket to the system board and lift the USB Type-C port bracket off the system board.

Step 60 — Disconnecting the Power-Adapter Port



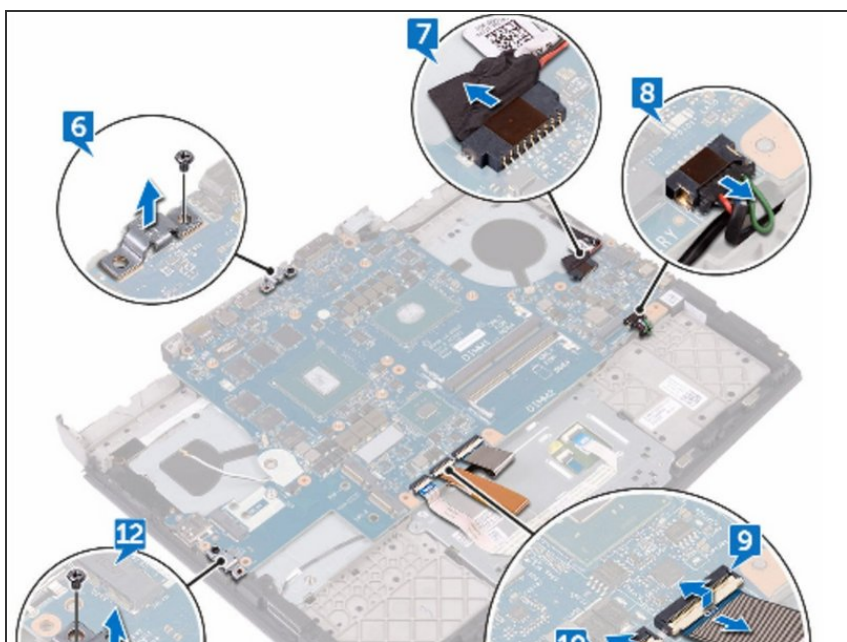
- Disconnect the power-adaptor port cable from the system board.

Step 61 — Disconnect the Speaker Cable



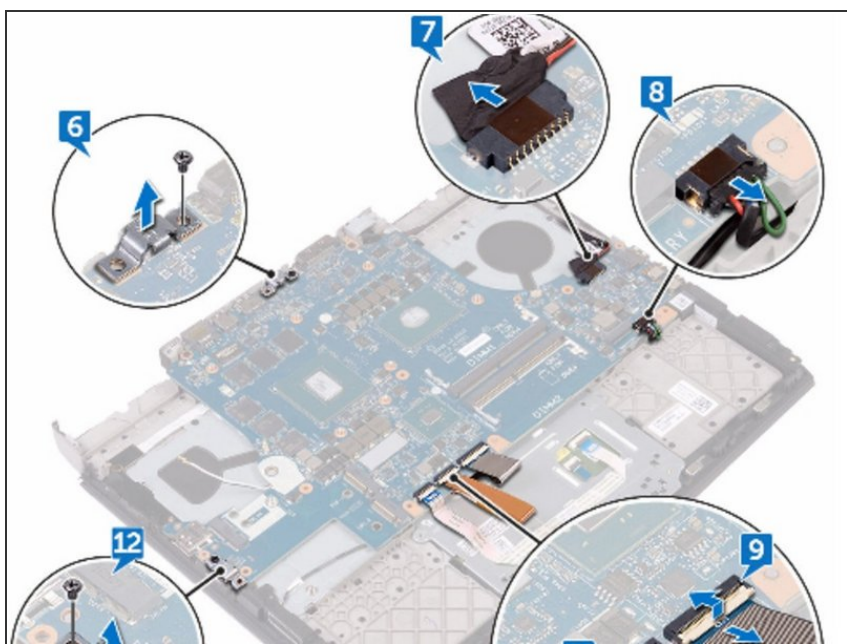
- Disconnect the speaker cable from the system board.

Step 62 — Open the Latch



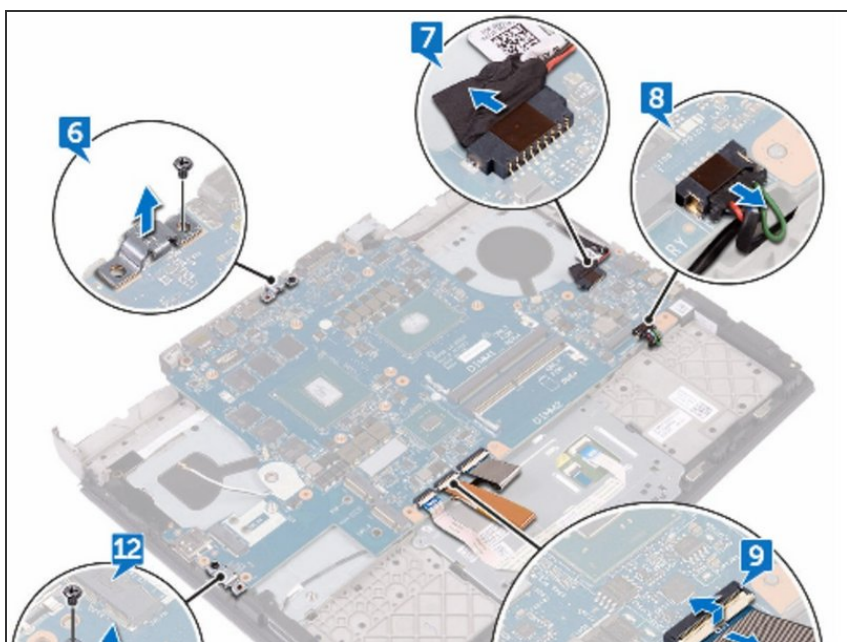
- Open the latch and disconnect the keyboard cable from the system board.

Step 63 — Open the Latch



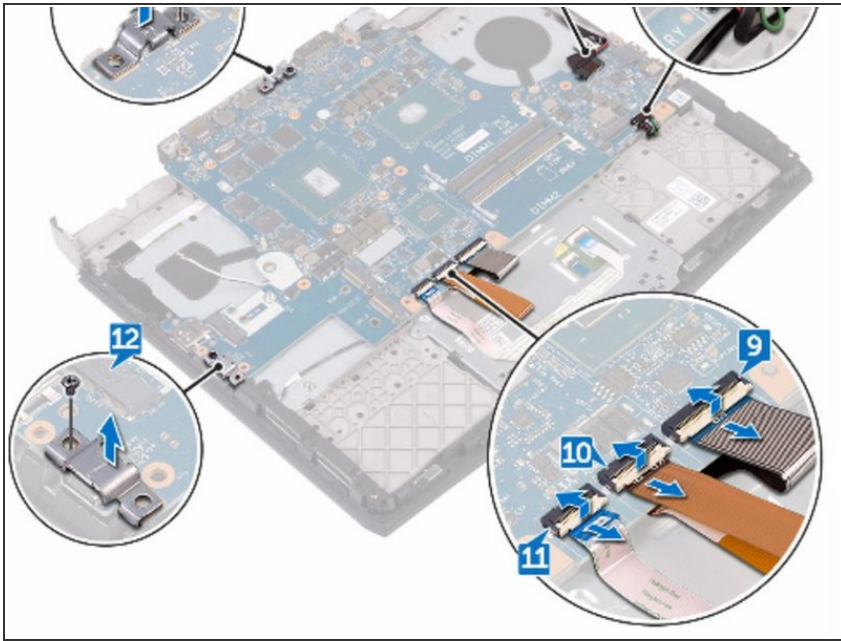
- Open the latch and disconnect the keyboard-backlight cable from the system board.

Step 64 — Disconnect the Touch-Pad Cable



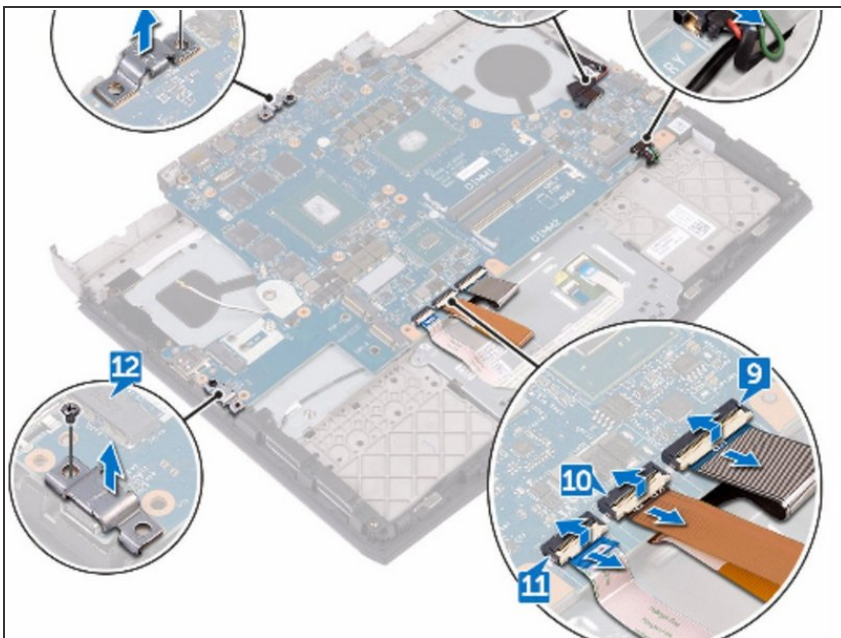
- Open the latch and disconnect the touch-pad cable from the system board.

Step 65 — Remove the Screw



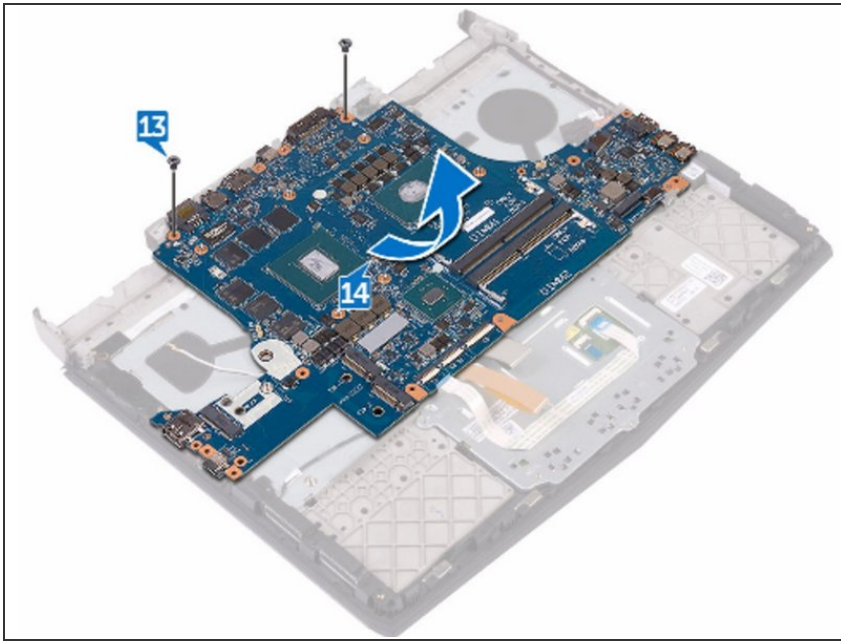
- Remove the screw (M2.5x6L) that secures the USB Type-C port bracket to the system board and lift the USB Type-C port bracket off the system board.

Step 66 — Remove the two Screws



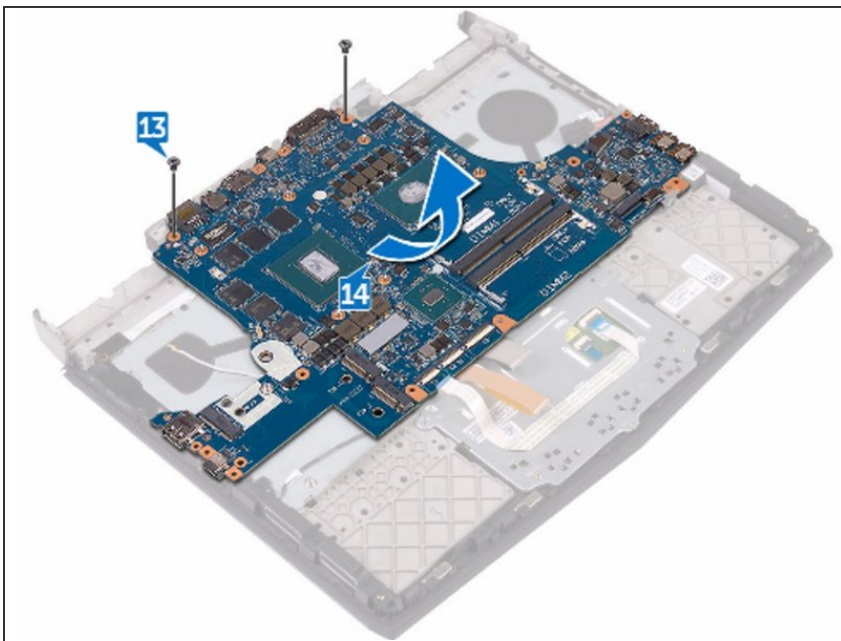
- Remove the two screws (M2.5x6L) that secure the system board to the palm- rest assembly.

Step 67 — Lift the System Board



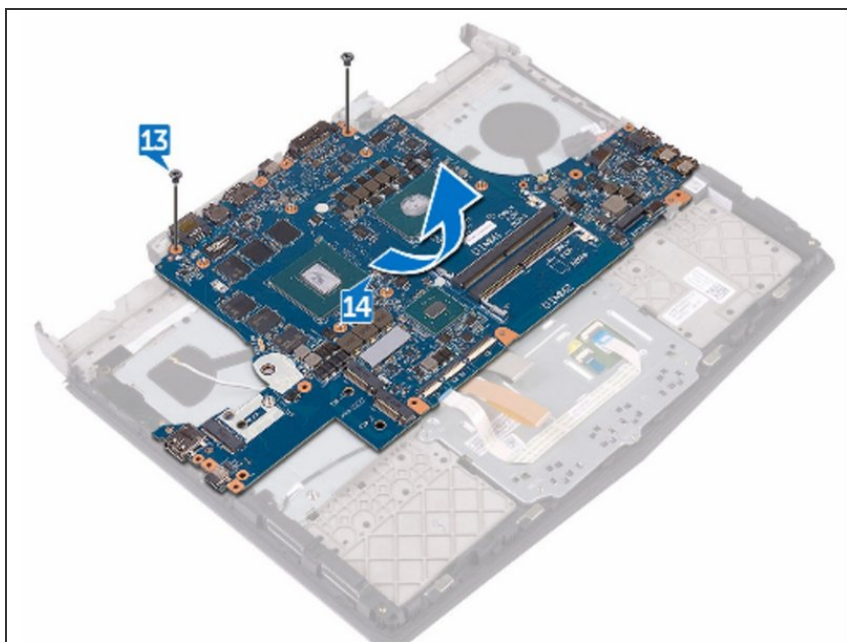
- Lift the system board off the palm-rest assembly.

Step 68 — Align the Screw Holes



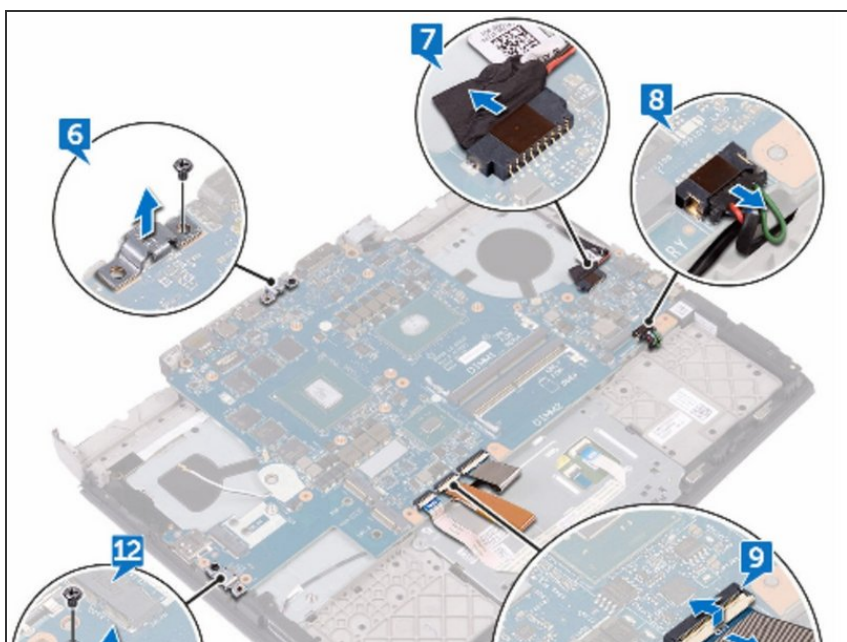
- ⚠ CAUTION: Ensure that no cables are under the system board.
- Align the screw holes on the **NEW** system board with the screw holes on the palm- rest assembly.

Step 69 — Replace the Two Screws



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

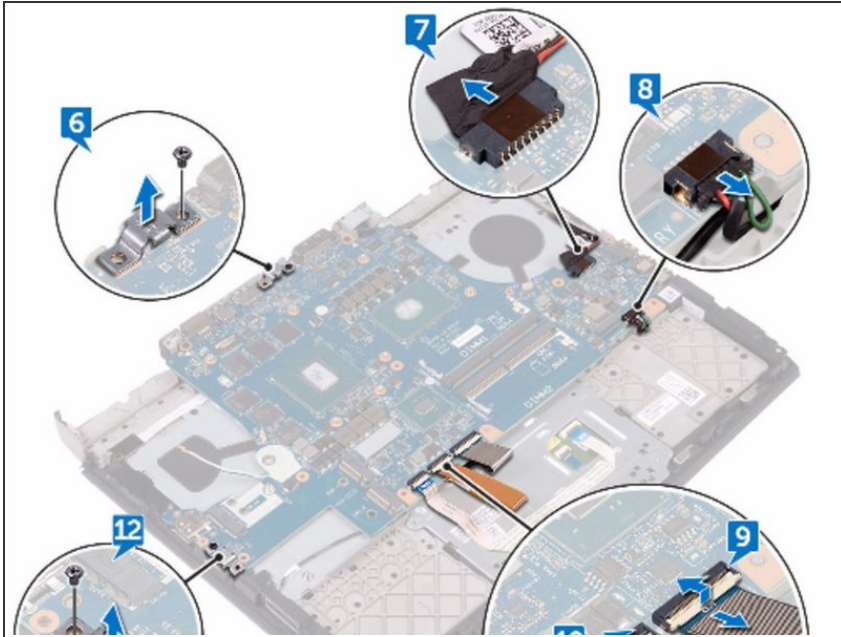
Step 70 — Align the Screw Hole



- Align the screw hole on the USB Type-C port bracket with the screw hole on the system board on the

back and right side of your computer.

Step 71 — Replace the Screw



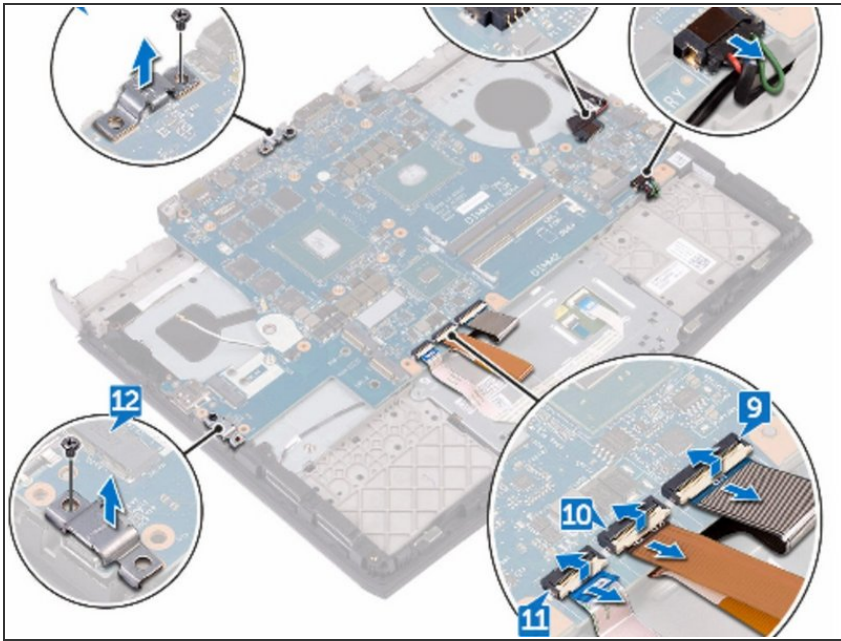
- Replace the screw (M2.5x6L) that secures the USB Type-C port bracket to the system board on the back and right side of your computer.

Step 72 — Slide the Touch-Pad Cable



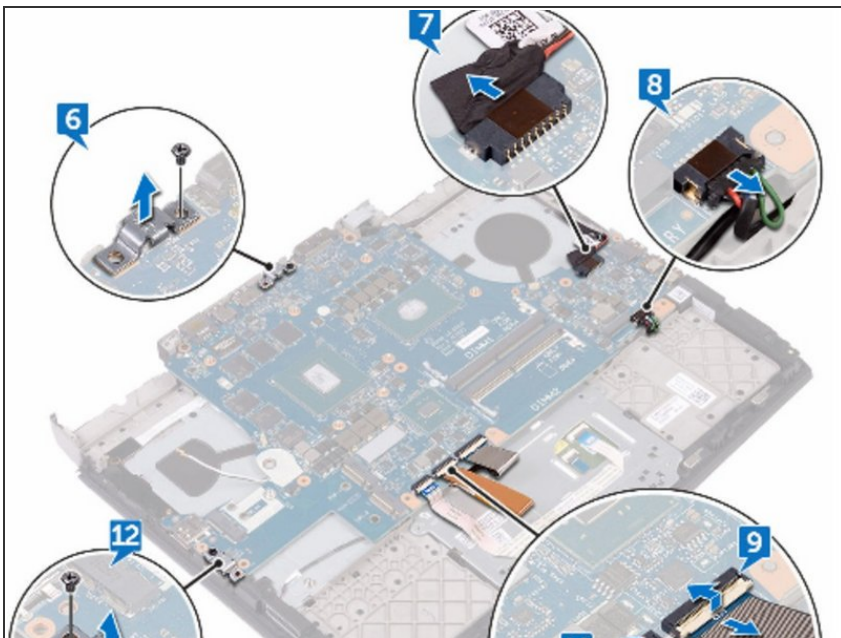
- Slide the touch-pad cable into the connector on the system board and close the latch to secure the cable.

Step 73 — Sliding the Keyboard-Backlight



- Slide the keyboard-backlight cable into the connector on the system board and close the latch to secure the cable.

Step 74 — Slide the Keyboard Cable



- Slide the keyboard cable into the connector on the system board and close the latch to secure the cable.

Step 75 — Connect the Speaker Cable



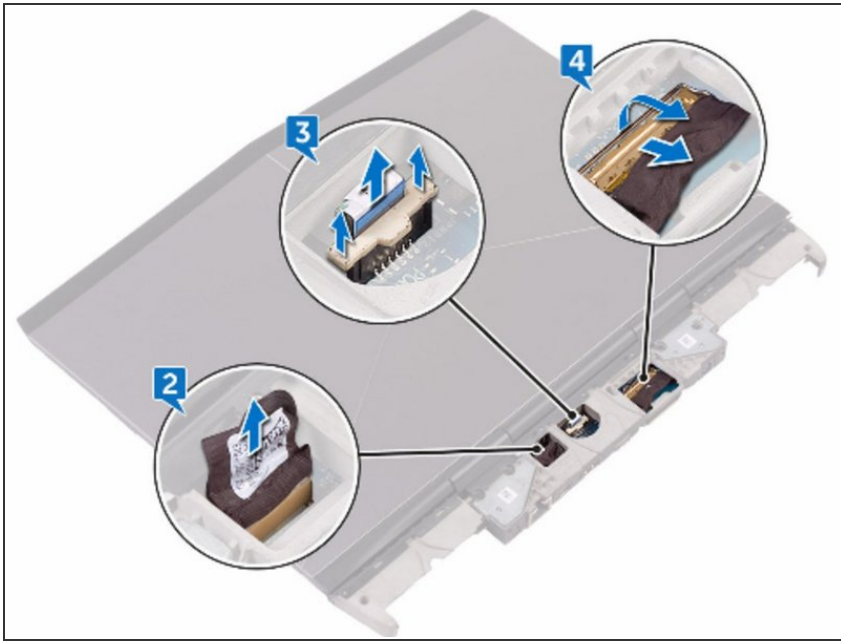
- Connect the speaker cable to the system board.

Step 76 — Connect the Power-Adapter



- Connect the power-adapter port cable to the system board.

Step 77 — Turn the Computer Over



- Turn the computer over.

Step 78 — Slide the Display Cable



- Slide the display cable into the connector on the system board and close the latch to secure the cable.

Step 79 — Connect the Power-Button Board Cable



- Connect the power-button board cable to the system board.

Step 80 — Connect the Logo-Board Cable



- Connect the logo-board cable to the system board.

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