



Maintenance and Service Guide

HP Chromebook x360 14

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Product notice

This user guide describes features that are common to most models. Some features may not be available on your computer.

To access the latest user guides, go to <http://www.hp.com/support>, and follow the instructions to find your product. Then select **User Guides**.

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For any further information or to request a full refund of the price of the computer, please contact your seller.

Safety warning notice


 **WARNING!** To reduce the possibility of heat-related injuries or of overheating the device, do not place the device directly on your lap or obstruct the device air vents. Use the device only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to contact the skin or a soft surface, such as pillows or rugs or clothing, during operation. The device and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950-1).

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1 Product description

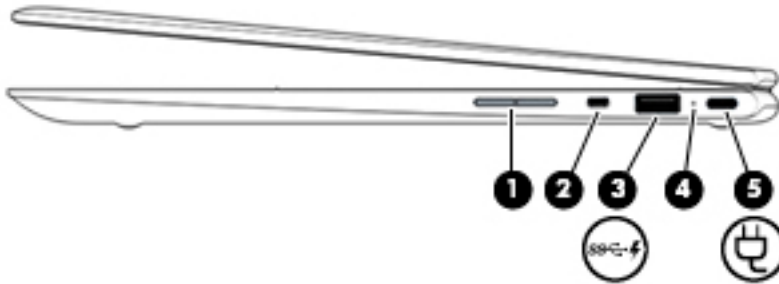
Category	Description
Product Name	HP Chromebook x360 14 Model number: 14-da0xxx CTO Model: 14t-da000
Processor	8th-generation Intel® Core™ processors: i5-8250U 1.60-GHz (SC turbo up to 3.40-GHz) quad core processor (6.0-MB L3 cache, 2400-MHz FSB, 15 W) i3-8130U 2.20-GHz (SC turbo up to 3.40-GHz) dual core processor (4.0-MB L3 cache, 2400-MHz FSB, 15 W)
Graphics	Internal Graphics Intel HD Graphics 620 Intel HD Graphics 610
Panel	14.0-inch, full high-definition (FHD) (1920×1080), BrightView, UWVA 45, WLED, eDP, slim; typical brightness: 220 nits
Memory	Supports DDR4-2133, non-upgradeable, on-board system memory in the following configurations: 8 GB 4 GB
Storage	Embedded Multimedia Controller (eMMC) v 5.0 64 GB 32 GB
Audio and video	Fixed (no tilt) integrated HP TrueVision HD camera 1280×720 by 30 frames per second with LED Dual microphones with appropriate echo-cancellation, noise-suppression software Dual speakers Audio by B&O Play
Security	Kensington Nano Security Slot
Wireless	Integrated wireless local area network (WLAN) with two built-in antennas Supports the Intel Dual Band Wireless-AC 7265 802.11 ac 2×2 WiFi + Bluetooth® 4.2 WLAN module (non-vPro)
Media card reader	Supports SD/SDHC/SDXC Push-push insertion/removal
Ports	(2) USB 3.1 Gen1 Type-C ports (delivery, video, data) HDMI v1.4b supporting up to 1920×1080 @ 60Hz via USB Type-C



Category	Description
	USB 3.1 Gen1 Type-A port Headphone/microphone combo jack Internal: USB 2.0 allocation; 1 for WLAN combo, 1 for camera M.2 NGFF connector
Keyboard/pointing devices	Google® Assistant Keyboard: Full-sized, textured, island-style, backlit keyboard TouchPad: Multitouch gestures enabled Taps enabled as default
Power requirements	Supports a 3-cell, 60-WHr, long-life battery Supports a 45 W nPFC, USB Type-C Straight Type AC adapter 1 meter power cord (C5)
Operating system	Preinstalled: Google Chrome64® operating system
Serviceability	End user replaceable parts: AC adapter

2 Getting to know your computer

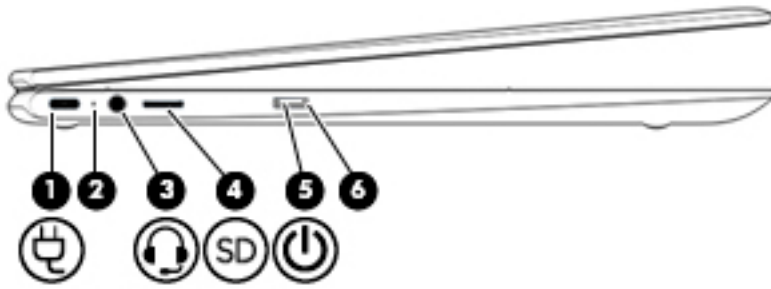
Your computer features top-rated components. This chapter provides details about your components, where they are located, and how they work.





Right side



Component	Description
(1)	Volume button Controls speaker volume on the computer.
(2)	Security cable slot Attaches an optional security cable to the computer. NOTE: The security cable is designed to act as a deterrent, but it may not prevent the computer from being mishandled or stolen.
(3)	 USB SuperSpeed port with HP Sleep and Charge Connects a USB device, provides high-speed data transfer, and, even when the computer is off, charges most products such as a cell phone, camera, activity tracker, or smartwatch.
(4)	AC adapter and battery light <ul style="list-style-type: none">White: The AC adapter is connected and the battery is fully charged.Amber: The AC adapter is connected and the battery is charging.Blinking amber: The battery has an error.Off: The battery is not charging.
(5)	 USB Type-C power connector and port Connects an AC adapter that has a USB Type-C connector, supplying power to the computer and, if needed, charging the computer battery. – and – Connects a USB device that has a Type-C connector, such as a cell phone, camera, activity tracker, or smartwatch, and provides data transfer. – and – Connects a display device that has a USB Type-C connector, providing DisplayPort output. NOTE: Cables and/or adapters (purchased separately) may be required.

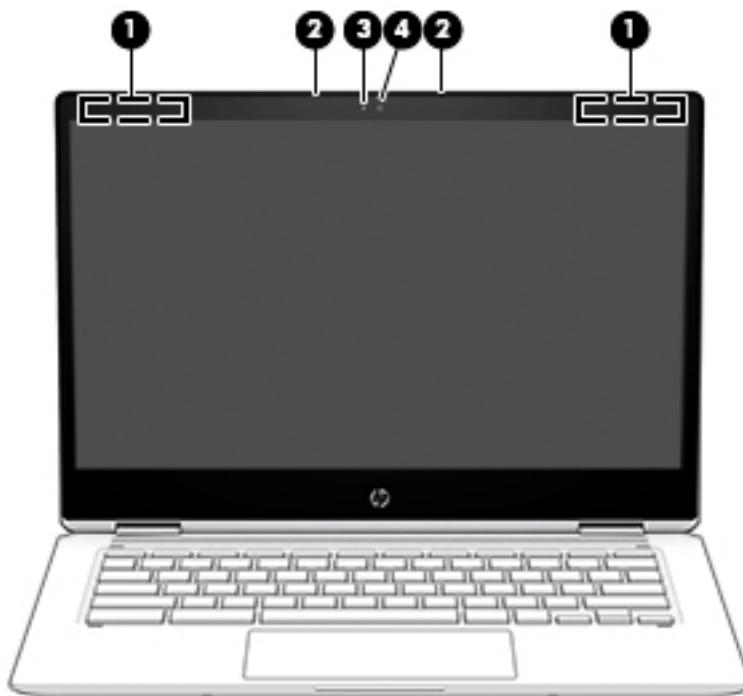
Left side



Component	Description
(1)  USB Type-C power connector and port	Connects an AC adapter that has a USB Type-C connector, supplying power to the computer and, if needed, charging the computer battery. – and – Connects a USB device that has a Type-C connector, such as a cell phone, camera, activity tracker, or smartwatch, and provides data transfer. – and – Connects a display device that has a USB Type-C connector, providing DisplayPort output. NOTE: Cables and/or adapters (purchased separately) may be required.
(2) AC adapter and battery light	<ul style="list-style-type: none"> • White: The AC adapter is connected and the battery is fully charged. • Amber: The AC adapter is connected and the battery is charging. • Blinking amber: The battery has an error. • Off: The battery is not charging.
(3)  Audio-out (headphone)/Audio-in (microphone) combo jack	Connects optional powered stereo speakers, headphones, earbuds, a headset, or a television audio cable. Also connects an optional headset microphone. This jack does not support optional standalone microphones. WARNING! To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, refer to the <i>Regulatory, Safety, and Environmental Notices</i> . NOTE: When a device is connected to the jack, the computer speakers are disabled.
(4)  MicroSD memory card reader	Reads optional memory cards that enable you to store, manage, share, or access information. To insert a card: <ol style="list-style-type: none"> 1. Hold the card label-side up, with connectors facing the computer. 2. Insert the card into the memory card reader, and then press in on the card until it is firmly seated. To remove a card: <ul style="list-style-type: none"> ▲ Press in on the card, and then remove it from the memory card reader.
(5)  Power button	<ul style="list-style-type: none"> • When the computer is off, press the button to turn on the computer. • When the computer is in the Sleep state, press the button briefly to exit Sleep.

Component	Description
	<ul style="list-style-type: none"> When the computer is on and you want to turn it off, press and hold the button to lock the screen, and then continue to press the button until the computer turns off.
(6) Power light	<ul style="list-style-type: none"> On: The computer is on. Blinking: The computer is in the Sleep state, a power saving state. The computer shuts off power to the display and other unneeded components. Off: The computer is off.

Display



Component	Description
(1) WLAN antennas*	Send and receive wireless signals to communicate with wireless local area networks (WLANS).
(2) Internal microphones (2)	Record sound.
(3) Camera light	On: The camera is in use.
(4) Camera	Allows you to video chat, record video, and record still images.

*The antennas are not visible from the outside of the computer, and antenna location varies. For optimal transmission, keep the areas immediately around the antennas free from obstructions.

For wireless regulatory notices, see the section of the *Regulatory, Safety, and Environmental Notices* that applies to your country or region.

To access this guide, go to <http://www.hp.com/support>, and follow the instructions to find your product. Then select **User Guides**.

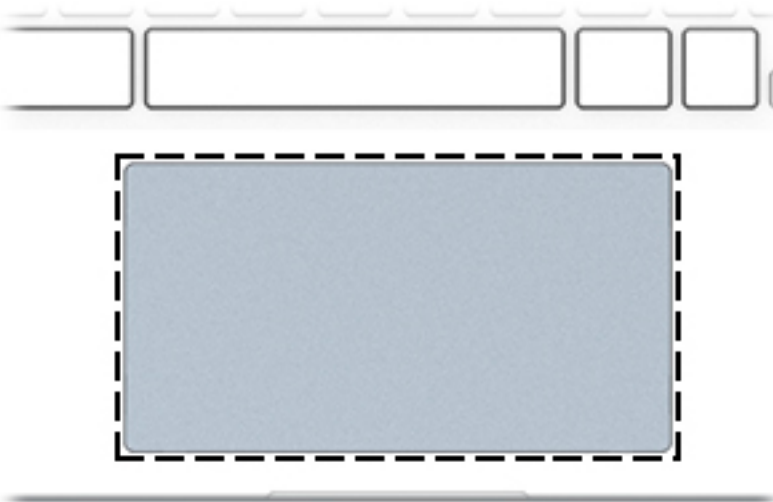
Speakers



Components	Description
Speakers (2)	Produce sound.

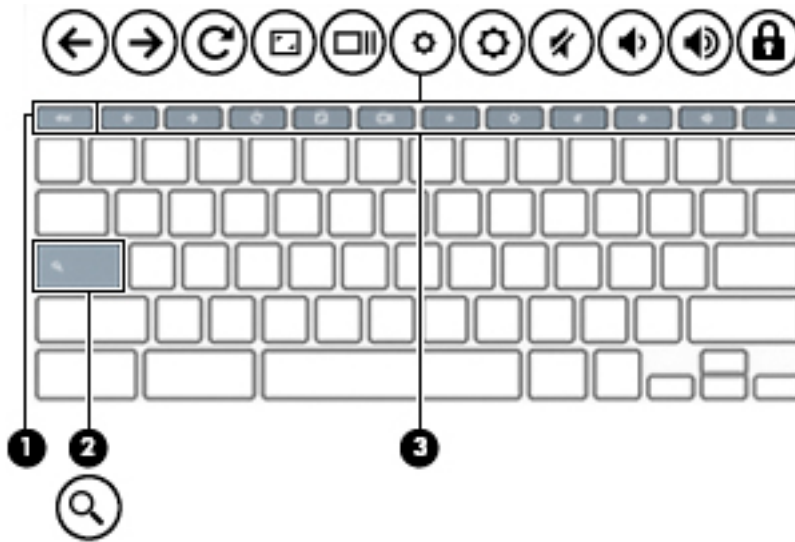
Keyboard area


TouchPad



Component	Description
TouchPad zone	Reads your finger gestures to move the pointer or activate items on the screen.

Special keys
















Component	Description
(1) esc key	Activates certain computer functions when pressed in combination with other keys, such as tab or shift.
(2)  Search key	Searches your apps and the Web from your apps list.
(3) Action keys	Execute frequently used system functions.

Action keys

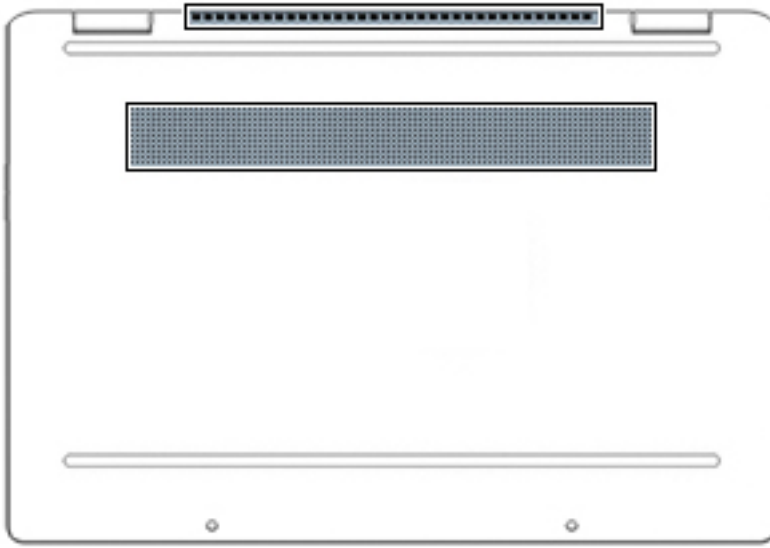
An action key performs the function indicated by the icon on the key. To determine which keys are on your product, see [Special keys on page 7](#).

▲ To use an action key, press and hold the key.

For more information on action keys and keyboard shortcuts, go to <https://support.google.com/chromebook/answer/183101>. Select your language at the bottom of the page.

Icon	Key	Description
	Back	Displays the previous page in your browser history.
	Forward	Displays the next page in your browser history.
	Reload	Reloads your current page.
	Full screen	Opens your page in full-screen mode.
	Display apps	Displays open apps. NOTE: Pressing this button in conjunction with <code>ctrl</code> takes a screenshot.
	Brightness down	Decreases the screen brightness incrementally as long as you hold down the key.
	Brightness up	Increases the screen brightness incrementally as long as you hold down the key.
	Mute	Mutes speaker sound.
	Volume down	Decreases speaker volume incrementally as long as you hold down the key.
	Volume up	Increases speaker volume incrementally as long as you hold down the key.
	Lock screen	Locks and unlocks the screen.
<code>alt+</code> 	Keyboard backlight brightness down	Decreases the keyboard backlight brightness.
<code>alt+</code> 	Keyboard backlight brightness up	Increases the keyboard backlight brightness.


Bottom



Components	Description
Vents (2)	Enable airflow to cool internal components. NOTE: The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.

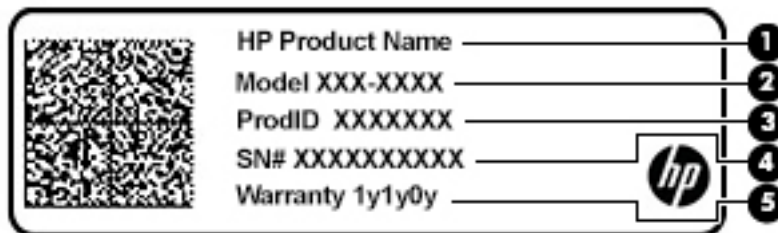
Labels

The labels affixed to the computer provide information you may need when you troubleshoot system problems or travel internationally with the computer. Labels may be in paper form or imprinted on the product.

 **IMPORTANT:** Check the following locations for the labels described in this section: the bottom of the computer, inside the battery bay, under the service door, on the back of the display, or on the bottom of a tablet kickstand.

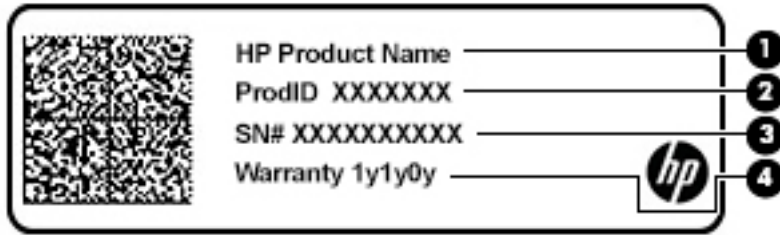
- Service label—Provides important information to identify your computer. When contacting support, you may be asked for the serial number, the product number, or the model number. Locate this information before you contact support.

Your service label will resemble one of the examples shown below. Refer to the illustration that most closely matches the service label on your computer.



Component

- (1) HP product name
 - (2) Model number
 - (3) Product ID
 - (4) Serial number
 - (5) Warranty period
-



Component

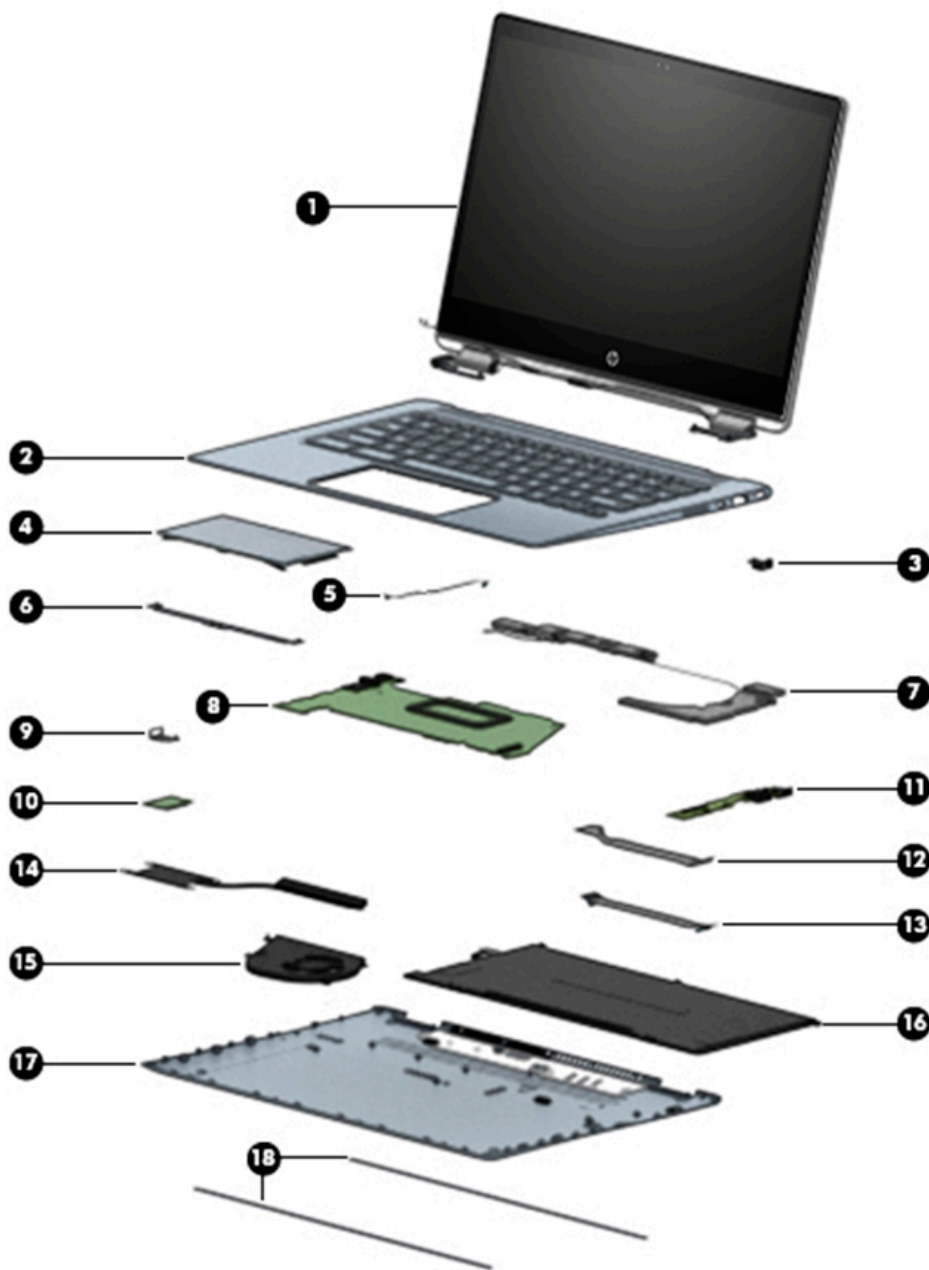
- (1) HP product name
 - (2) Product ID
 - (3) Serial number
 - (4) Warranty period
-

- Regulatory label(s)—Provide(s) regulatory information about the computer.
- Wireless certification label(s)—Provide(s) information about optional wireless devices and the approval markings for the countries or regions in which the devices have been approved for use.

3 Illustrated parts catalog

 **NOTE:** HP continually improves and changes product parts. For complete and current information on supported parts for your computer, go to <http://partsurfer.hp.com>, select your country or region, and then follow the on-screen instructions.

Computer major components



Item	Component	Spare part number
(1)	Display assembly	L36904-001
(2)	Keyboard/top cover (includes keyboard cable):	
	For use in Belgium	L36889-A41
	For use in Denmark, Finland, and Norway	L36889-DH1
	For use in France	L36889-051
	For use in the Netherlands	L36889-B31
	For use in the United Kingdom	L36889-031
	For use in the United States	L36889-001
(3)	USB bracket	L36909-001
(4)	TouchPad board	L36897-001
(5)	TouchPad cable	L36898-001
(6)	TouchPad bracket	L36910-001
(7)	Speaker Kit (includes speaker tape)	L36896-001
(8)	System board (includes replacement thermal material):	
	Equipped with an Intel Core i5-8250U processor, 8 GB of system memory, and 64 GB of eMMC system storage	L36885-001
	Equipped with an Intel Core i3-8130U processor, 8 GB of system memory, and 64 GB of eMMC system storage	L36884-001
(9)	Lock bracket	L36911-001
(10)	WLAN module (Intel Dual Band Wireless-AC 7265 802.11 ac 2×2 WiFi + Bluetooth 4.2 Combo Adapter)	901229-855
(11)	I/O board	L36895-001
(12)	I/O cable, 30P	L36892-001
(13)	I/O cable, 40P	L36893-001
(14)	Heat sink (includes replacement thermal material)	L36894-001
(15)	Fan	L36913-001
(16)	Battery (3-cell, 60-WHr)	L29959-005
(17)	Bottom cover	L36891-001
(18)	Rubber Kit	L36890-001

Miscellaneous parts

Component	Spare part number
AC adapter (45-W HP Smart AC adapter, non-PFC, USB Type-C)	934739-850
Power cord	
For use in Denmark	L19360-001
For use in Europe	L19361-001
For use in North America	L19367-001
For use in the United Kingdom	L19373-001
Miscellaneous Parts Kit , includes WLAN Mylar, WLAN tape, I/O board bottom Mylar, speaker tape, and screw cap Mylar	L36912-001
Screw Kit	L36914-001

4 Removal and replacement procedures preliminary requirements


Tools required


You will need the following tools to complete the removal and replacement procedures:

- Non-marking, non-conductive pry tool
- Magnetic Phillips P1 screwdriver


Service considerations

The following sections include some of the considerations that you must keep in mind during disassembly and assembly procedures.


 **NOTE:** As you remove each subassembly from the computer, place the subassembly (and all accompanying screws) away from the work area to prevent damage.

 **NOTE:** Before attempting to insert a USB recovery image, make sure to power on the unit completely until it reaches the Google login screen. The TouchPad firmware updates when the unit is turned on for the first time. If interrupted, the TouchPad could stop working. If the TouchPad stops working, follow the steps to image the unit using the RMA shim process. This will reactivate the TouchPad firmware. If this does not fix the issue, replace the TouchPad through warranty service.

Plastic parts

 **CAUTION:** Using excessive force during disassembly and reassembly can damage plastic parts. Use care when handling the plastic

Cables and connectors

 **CAUTION:** When servicing the computer, be sure that cables are placed in their proper locations during the reassembly process. Improper cable placement can damage the computer.

Cables must be handled with extreme care to avoid damage. Apply only the tension required to unseat or seat the cables during removal and insertion. Handle cables by the connector whenever possible. In all cases, avoid bending, twisting, or tearing cables. Be sure that cables are routed in such a way that they cannot be caught or snagged by parts being removed or replaced. Handle flex cables with extreme care; these cables tear easily.

Drive handling

⚠ CAUTION: Drives are fragile components that must be handled with care. To prevent damage to the computer, damage to a drive, or loss of information, observe these precautions:

Before removing or inserting a hard drive, shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

Before handling a drive, be sure that you are discharged of static electricity. While handling a drive, avoid touching the connector.

Before removing an optical drive, be sure that a disc is not in the drive and be sure that the optical drive tray is closed.

Handle drives on surfaces covered with at least one inch of shock-proof foam.

Avoid dropping drives from any height onto any surface.

After removing a hard drive or an optical drive, place it in a static-proof bag.

Avoid exposing an internal hard drive to products that have magnetic fields, such as monitors or speakers.

Avoid exposing a drive to temperature extremes or liquids.

If a drive must be mailed, place the drive in a bubble pack mailer or other suitable form of protective packaging and label the package "FRAGILE."

Workstation guidelines

Follow these grounding workstation guidelines:

- Cover the workstation with approved static-shielding material.
- Use a wrist strap connected to a properly grounded work surface and use properly grounded tools and equipment.
- Use conductive field service tools, such as cutters, screw drivers, and vacuums.
- When fixtures must directly contact dissipative surfaces, use fixtures made only of static-safe materials.
- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and Styrofoam.
- Handle ESD-sensitive components, parts, and assemblies by the case or PCM laminate. Handle these items only at static-free workstations.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting or removing connectors or test equipment.

Equipment guidelines

Grounding equipment must include either a wrist strap or a foot strap at a grounded workstation.

- When seated, wear a wrist strap connected to a grounded system. Wrist straps are flexible straps with a minimum of one megohm $\pm 10\%$ resistance in the ground cords. To provide proper ground, wear a strap snugly against the skin at all times. On grounded mats with banana-plug connectors, use alligator clips to connect a wrist strap.
- When standing, use foot straps and a grounded floor mat. Foot straps (heel, toe, or boot straps) can be used at standing workstations and are compatible with most types of shoes or boots. On conductive floors or dissipative floor mats, use foot straps on both feet with a minimum of one megohm resistance between the operator and ground. To be effective, the conductive must be worn in contact with the skin.

The following grounding equipment is recommended to prevent electrostatic damage:

- Antistatic tape
- Antistatic smocks, aprons, and sleeve protectors
- Conductive bins and other assembly or soldering aids
- Nonconductive foam
- Conductive tabletop workstations with ground cords of one megohm resistance
- Static-dissipative tables or floor mats with hard ties to the ground
- Field service kits
- Static awareness labels
- Material-handling packages
- Nonconductive plastic bags, tubes, or boxes
- Metal tote boxes
- Electrostatic voltage levels and protective materials

The following table lists the shielding protection provided by antistatic bags and floor mats.

Material	Use	Voltage protection level
Antistatic plastics	Bags	1,500 V
Carbon-loaded plastic	Floor mats	7,500 V
Metallized laminate	Floor mats	5,000 V

Electrostatic discharge damage

Electronic components are sensitive to electrostatic discharge (ESD). Circuitry design and structure determine the degree of sensitivity. Networks built into many integrated circuits provide some protection, but in many cases, ESD contains enough power to alter device parameters or melt silicon junctions.

A discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Even if the spark is neither felt nor heard, damage may have occurred.

An electronic device exposed to ESD may not be affected at all and can work perfectly throughout a normal cycle. Or the device may function normally for a while, then degrade in the internal layers, reducing its life expectancy.

⚠ CAUTION: To prevent damage to the tablet when you are removing or installing internal components, observe these precautions:


Keep components in their electrostatic-safe containers until you are ready to install them.

Before touching an electronic component, discharge static electricity by using the guidelines described in this section.

Avoid touching pins, leads, and circuitry. Handle electronic components as little as possible.

If you remove a component, place it in an electrostatic-safe container.

The following table shows how humidity affects the electrostatic voltage levels generated by different activities.

 **CAUTION:** A product can be degraded by as little as 700 V.


Typical electrostatic voltage levels			
Event	Relative humidity		
	10%	40%	55%
Walking across carpet	35,000 V	15,000 V	7,500 V
Walking across vinyl floor	12,000 V	5,000 V	3,000 V
Motions of bench worker	6,000 V	800 V	400 V
Removing DIPs from plastic tube	2,000 V	700 V	400 V
Removing DIPs from vinyl tray	11,500 V	4,000 V	2,000 V
Removing DIPs from Styrofoam	14,500 V	5,000 V	3,500 V
Removing bubble pack from PCB	26,500 V	20,000 V	7,000 V
Packing PCBs in foam-lined box	21,000 V	11,000 V	5,000 V

Packaging and transporting guidelines

Follow these grounding guidelines when packaging and transporting equipment:

- To avoid hand contact, transport products in static-safe tubes, bags, or boxes.
- Protect ESD-sensitive parts and assemblies with conductive or approved containers or packaging.
- Keep ESD-sensitive parts in their containers until the parts arrive at static-free workstations.
- Place items on a grounded surface before removing items from their containers.
- Always be properly grounded when touching a component or assembly.
- Store reusable ESD-sensitive parts from assemblies in protective packaging or nonconductive foam.
- Use transporters and conveyors made of antistatic belts and roller bushings. Be sure that mechanized equipment used for moving materials is wired to ground and that proper materials are selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

5 Removal and replacement procedures

 **CAUTION:** Components described in this chapter should only be accessed by an authorized service provider. Accessing these parts can damage the computer or void the warranty.

 **NOTE:** HP continually improves and changes product parts. For complete and current information on supported parts this your computer, go to <http://partsurfer.hp.com>, select your country or region, and then follow the on-screen instructions.

Component replacement procedures

There are as many as 40 screws that must be removed, replaced, and/or loosened when servicing the computer. Make special note of each screw size and location during removal and replacement.

Preparation for disassembly

See [Removal and replacement procedures preliminary requirements on page 14](#) for initial safety procedures.

1. Turn off the computer. If you are unsure whether the computer is off or in Sleep state, turn the computer on, and then shut it down through the operating system.
2. Disconnect the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer

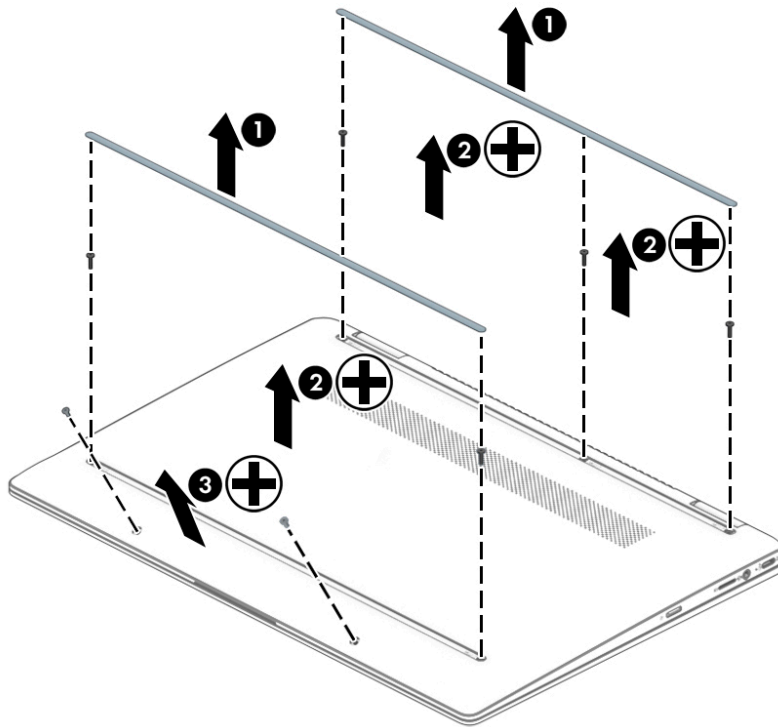
Computer feet and bottom cover

Description	Spare part number
Computer feet (included in the rubber kit)	L36890-001
Bottom cover	L36891-001

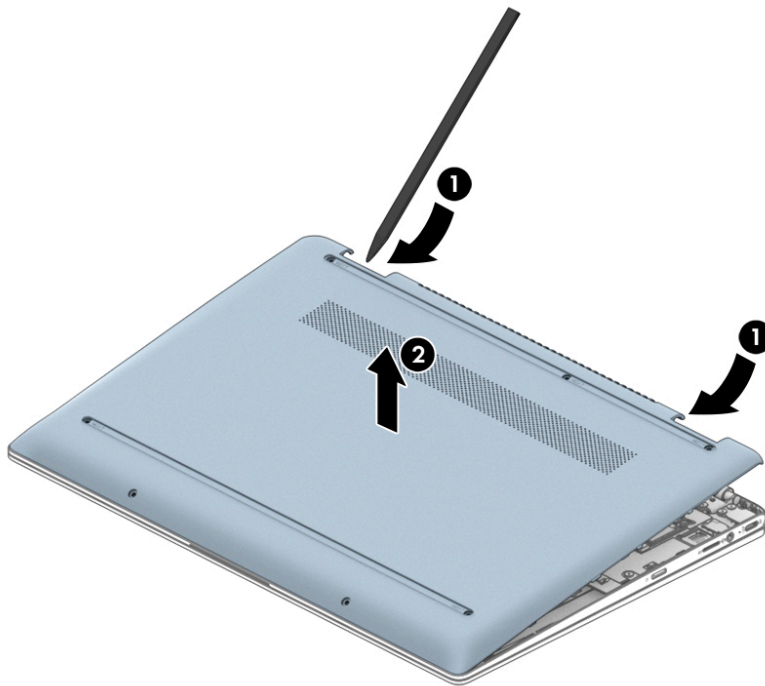
Remove the computer feet and bottom cover:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Close the computer and position it upside down.
3. Peel the two rubber feet off the computer **(1)**.
4. Remove the five Phillips M2.5×8.0 screws **(2)** from under the feet.

5. Remove the two Phillips M2.0×3.5 screws (3) from along the bottom edge of the computer.



6. Starting near the bottom corner, use a tool to disengage the bottom cover (1), and then remove the cover (2).



Reverse the procedure to install the bottom cover and rubber feet.

Battery

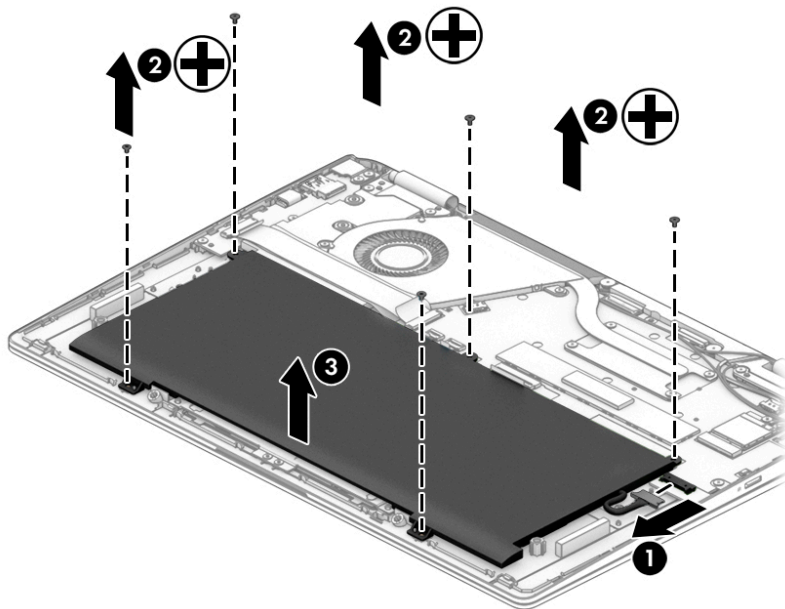
Description	Spare part number
Battery (3-cell, 60-WHr)	L29959-005

Before removing the battery, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).

Remove the battery:

1. Disconnect the battery cable **(1)** from the system board.
2. Remove the five Phillips M2.0×3.0 screws **(2)** that secure the battery to the computer.
3. Remove the battery **(3)**.




Reverse this procedure to install the battery.

WLAN module

Description	Spare part number
Intel Dual Band Wireless-AC 7265 802.11 ac 2x2 WiFi + Bluetooth 4.2 Combo Adapter	901229-855

 **NOTE:** WLAN module Mylar and tape are included in the Miscellaneous Parts Kit, spare part number L36912-001.


 **CAUTION:** To prevent an unresponsive system, replace the wireless module only with a wireless module authorized for use in the computer by the governmental agency that regulates wireless devices in your country or region. If you replace the module and then receive a warning message, remove the module to restore device functionality, and then contact technical support.

Before removing the WLAN module, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Disconnect the battery (see [Battery on page 20](#)).

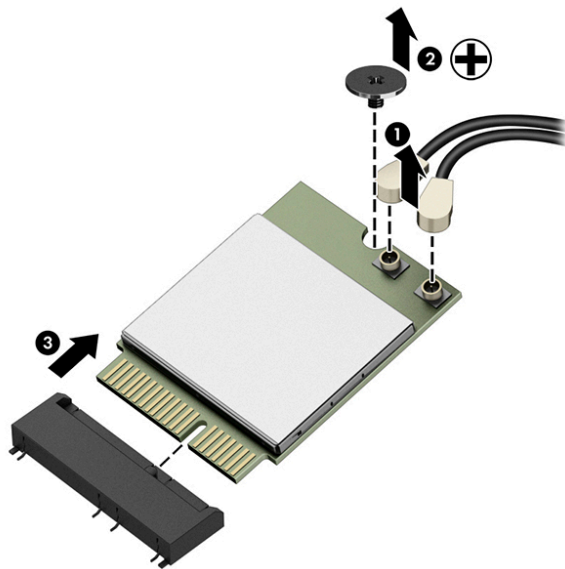
Remove the WLAN module:


1. Disconnect the WLAN antenna cables (**1**) from the terminals on the WLAN module.

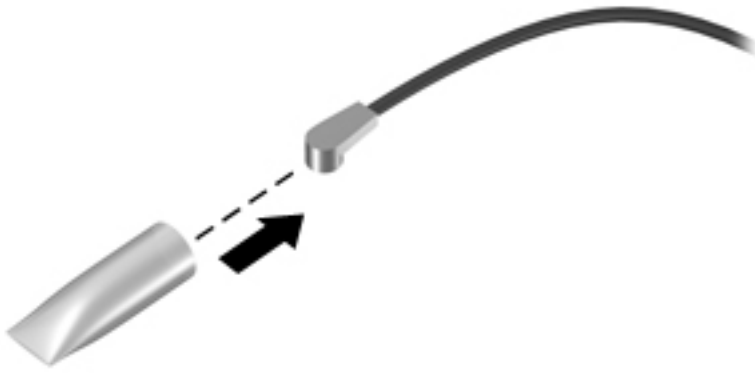
 **NOTE:** The WLAN antenna cable labeled "1" connects to the WLAN module "Main" terminal labeled "1." The WLAN antenna cable labeled "2" connects to the WLAN module "Aux" terminal labeled "2".

2. Remove the Phillips M2.0x3.0 screw (**2**) that secures the WLAN module to the system board. (The WLAN module tilts up.)
3. Remove the WLAN module (**3**) by pulling the module away from the slot at an angle.

 **NOTE:** WLAN modules are notched to prevent incorrect installation.



 **NOTE:** If the WLAN antenna is not connected to the terminal on the WLAN module, a protective sleeve must be installed on each antenna connector, as shown in the following illustration.



Reverse this procedure to install the WLAN module.

Fan

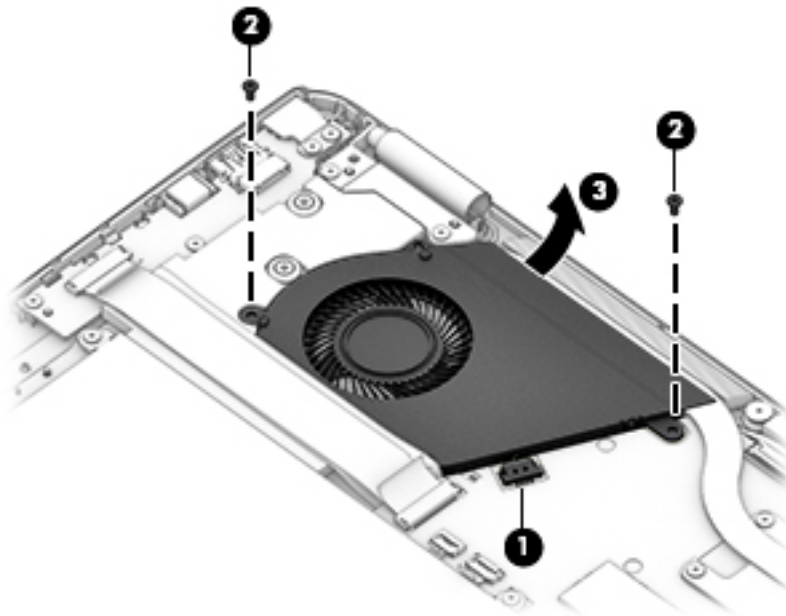
Description	Spare part number
Fan	L36913-001

Before removing the fan, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Disconnect the battery (see [Battery on page 20](#)).

Remove the fan:

1. Disconnect the fan cable from the system board **(1)**.
2. Remove the two Phillips M2.0×4.0 screws **(2)** that secure the fan to the system board.
3. Remove the fan from the computer **(3)**.



Reverse this procedure to install the fan.

Heat sink

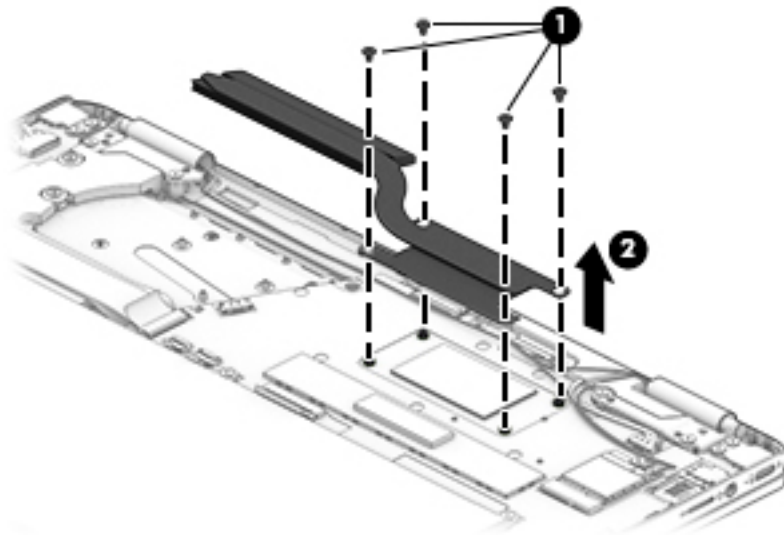
Description	Spare part number
Heat sink (includes replacement thermal material)	L36894-001

Before removing the heat sink, follow these steps:

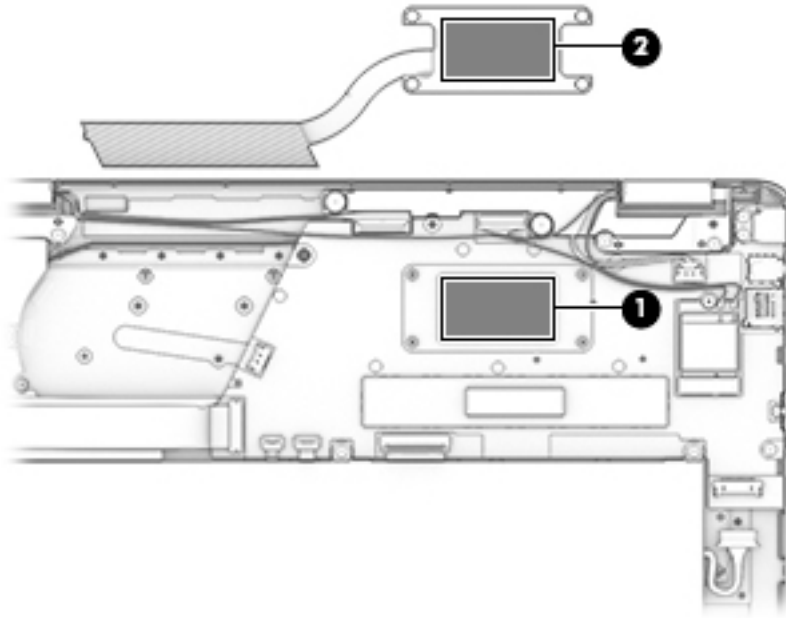
1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Disconnect the battery (see [Battery on page 20](#)).
4. Remove the fan (see [Fan on page 23](#)).

Remove the heat sink:

1. Remove the four Phillips M2.0×3.0 screws (**1**) that secure the heat sink to the system board.
2. Remove the heat sink (**2**).



- Each time the heat sink is removed, thoroughly clean the thermal material from the processor component **(1)** and the surface of the heat sink **(2)**. Replacement thermal material is included with the heat sink and system board spare part kits.



Reverse this procedure to install the heat sink.

TouchPad board

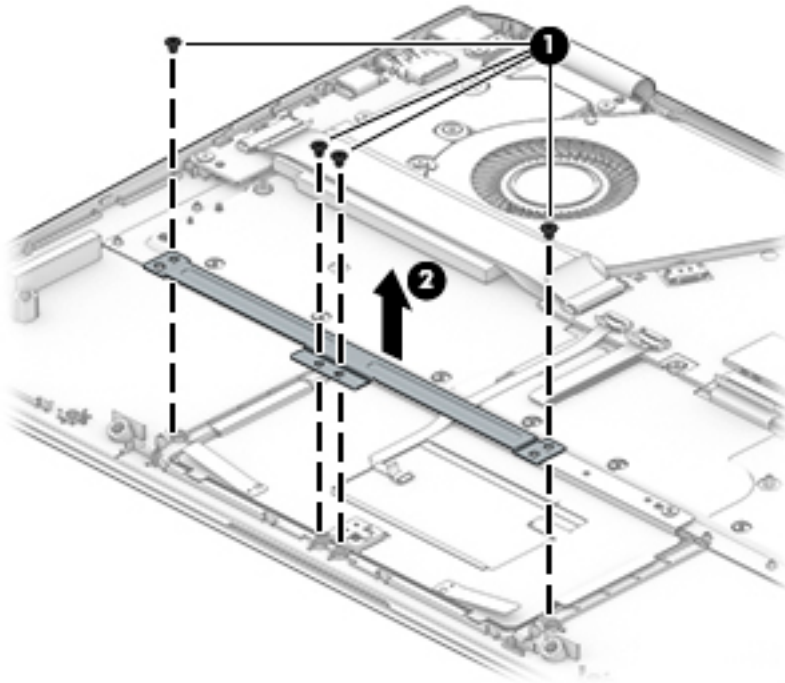
Description	Spare part number
TouchPad board	L36897-001
TouchPad bracket	L36910-001
TouchPad cable	L36898-001

Before removing the TouchPad board, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Remove the battery (see [Battery on page 20](#)).

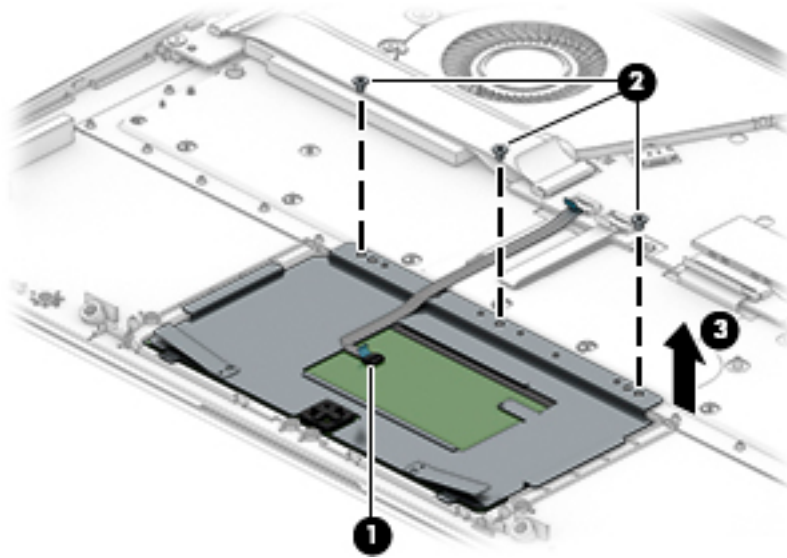
Remove the TouchPad board:

1. Remove the four Phillips M2.0×2.5 screws **(1)** that secure the TouchPad bracket to the TouchPad, and then remove the TouchPad bracket **(2)**.



2. Disconnect the cable from the TouchPad board ZIF connector **(1)**.
3. Remove the three Phillips M2.0×2.5 screws **(2)** that secure the TouchPad to the computer.

4. Remove the TouchPad board from the computer (3).



Reverse this procedure to install the TouchPad board.

Display assembly

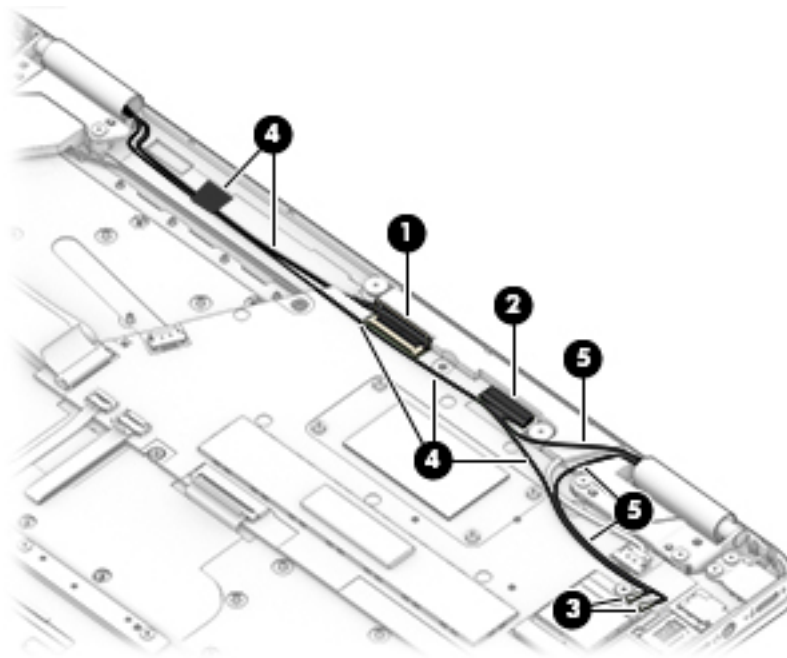
Description	Spare part number
Display assembly	L36904-001

Before removing the display assembly, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Disconnect the battery (see [Battery on page 20](#)).

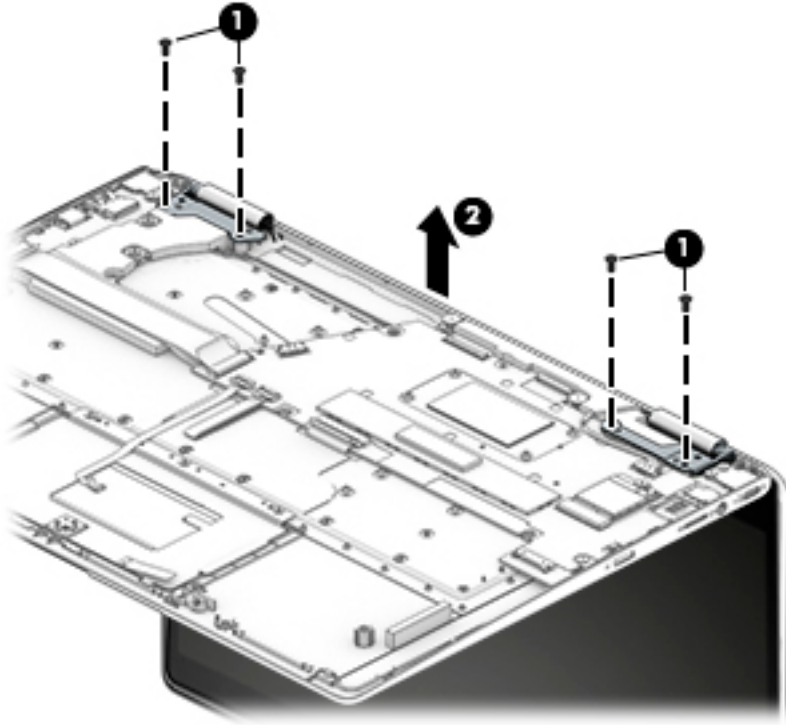
Remove the display assembly:

1. Disconnect the display cable **(1)** and the touch control cable **(2)** from the system board.
2. Disconnect the antenna cables from the WLAN module **(3)**.
3. Remove the display cable from the routing channel in the computer **(4)**.
4. Remove the antenna cables from the routing channel in the computer **(5)**.



5. Position the computer with the keyboard facing downward and the display open 90 degrees and hanging over the edge of a table.
6. Remove the four Phillips M2.5×6.0 screws **(1)** that secure the display to the computer.

7. Separate the display from the computer (2).



Reverse this procedure to install the display assembly.

I/O board

Description	Spare part number
I/O board	L36895-001
I/O cable, 30P	L36892-001
I/O cable, 40P	L36893-001

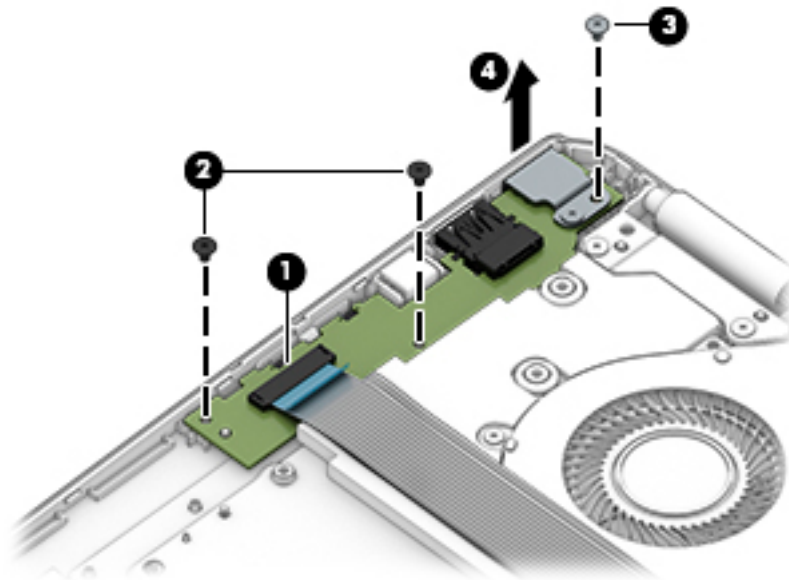
 **NOTE:** I/O board bottom Mylar is included in the Miscellaneous Parts Kit, spare part number L36912-001.

Before removing the I/O board, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Remove the battery (see [Battery on page 20](#)).

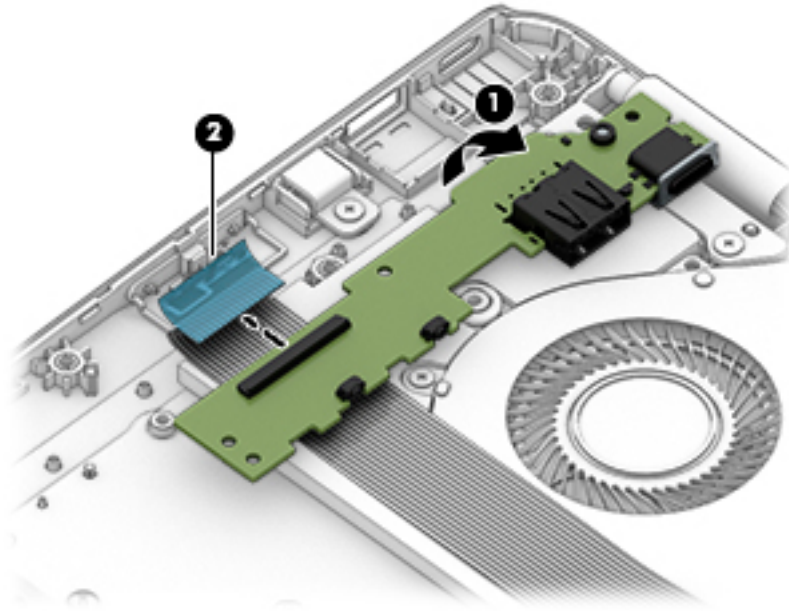
Remove the I/O board:

1. Disconnect the cable from the ZIF connector on the I/O board **(1)**.
2. Remove the two Phillips M2.0×3.0 screws **(2)** that secure the I/O board to the computer.
3. Remove the Phillips M2.0×4.0 screw **(3)** from the USB bracket.
4. Lift the I/O board **(4)**.



5. Rotate the board upside down **(1)**.

6. Disconnect the cable from the ZIF connector on the bottom of the I/O board (2).



Reverse this procedure to install the I/O board.

USB bracket, I/O board

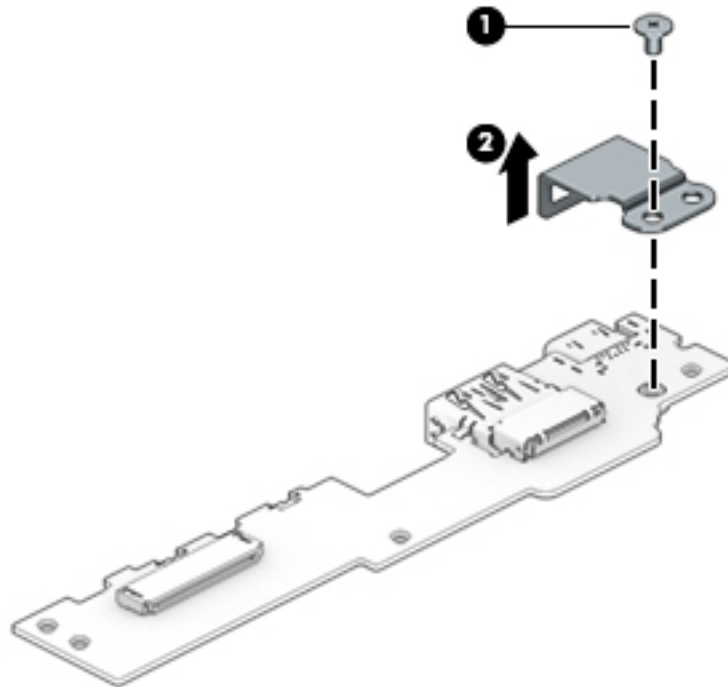
Description	Spare part number
USB bracket	L36909-001

Before removing the USB bracket from the I/O board, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Remove the battery (see [Battery on page 20](#)).
4. Remove the I/O board (see [USB bracket, I/O board on page 32](#)).

Remove the USB bracket from the I/O board:

1. Remove the Phillips M2.0×4.0 screw (1) that secures the USB bracket to the I/O board.
2. Remove the bracket from the I/O board (2).



Reverse this procedure to install the USB bracket onto the I/O board.

Lock bracket

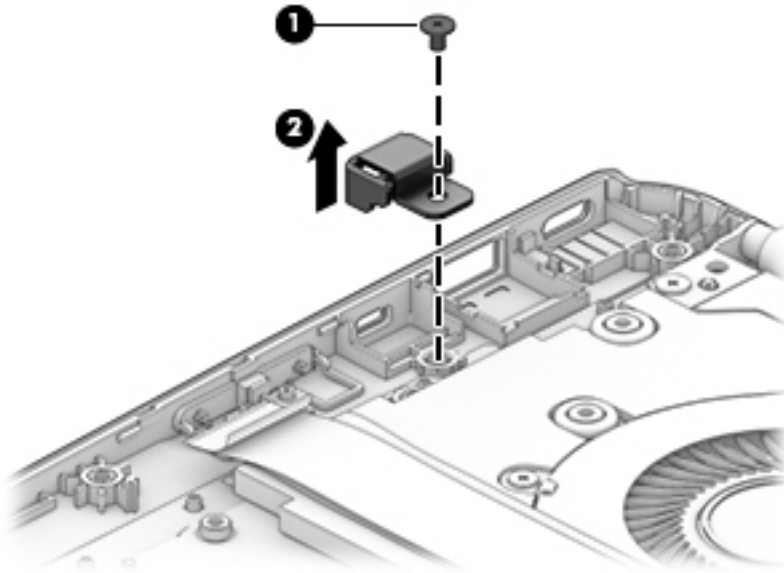
Description	Spare part number
Lock bracket	L36911-001

Before removing the lock bracket, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Remove the battery (see [Battery on page 20](#)).
4. Remove the I/O board (see [USB bracket, I/O board on page 32](#)).

Remove the lock bracket:

1. Remove the Phillips M2.5×3.0 screw **(1)** that secures the lock bracket to the computer.
2. Remove the lock bracket **(2)**.



Reverse this procedure to install the lock bracket.

System board



NOTE: The system board spare part kit includes replacement thermal material.

Description	Spare part number
System board equipped with an Intel Core i5-8250U processor, 8 GB of system memory, and 64 GB of eMMC system storage	L36885-001
System board equipped with an Intel Core i3-8130U processor, 8 GB of system memory, and 64 GB of eMMC system storage	L36884-001

Before removing the system board, follow these steps:

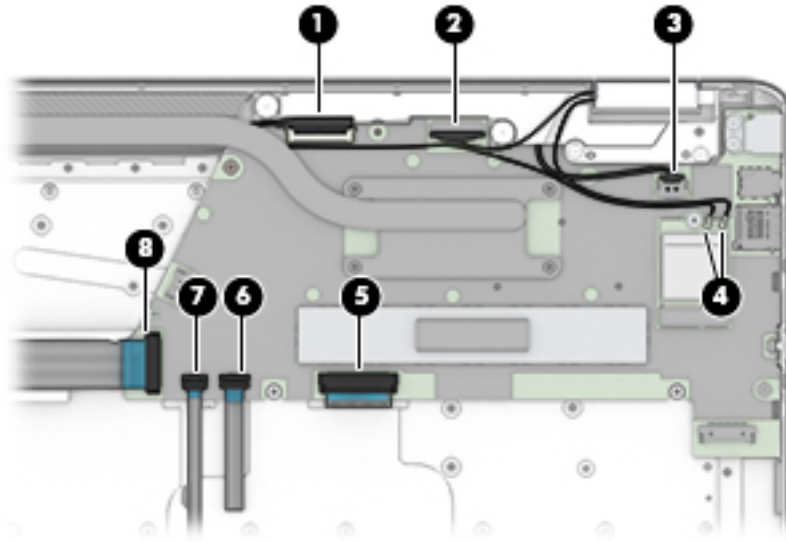
1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Remove the battery (see [Battery on page 20](#)).
4. Remove the fan (see [Fan on page 23](#)).

When replacing the system board, be sure to remove the following component (if applicable) from the defective system board and install it on the replacement system board:


- WLAN module (see [WLAN module on page 21](#))

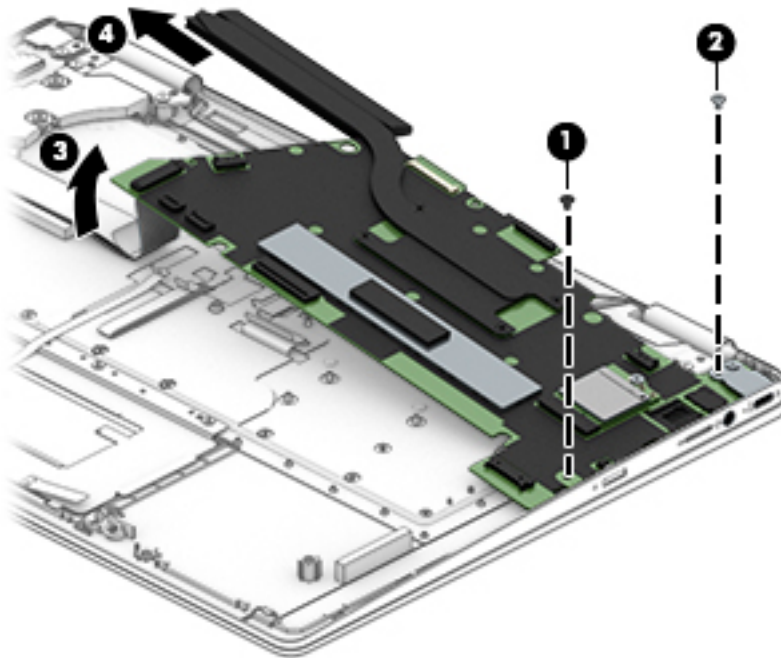
Remove the system board:

1. Disconnect the following cables from the system board:
 - (1) Display cable
 - (2) Touch control cable
 - (3) Speaker cable
 - (4) Antenna cables from the WLAN module
 - (5) Keyboard cable
 - (6) Backlight cable
 - (7) TouchPad cable
 - (8) I/O board cable

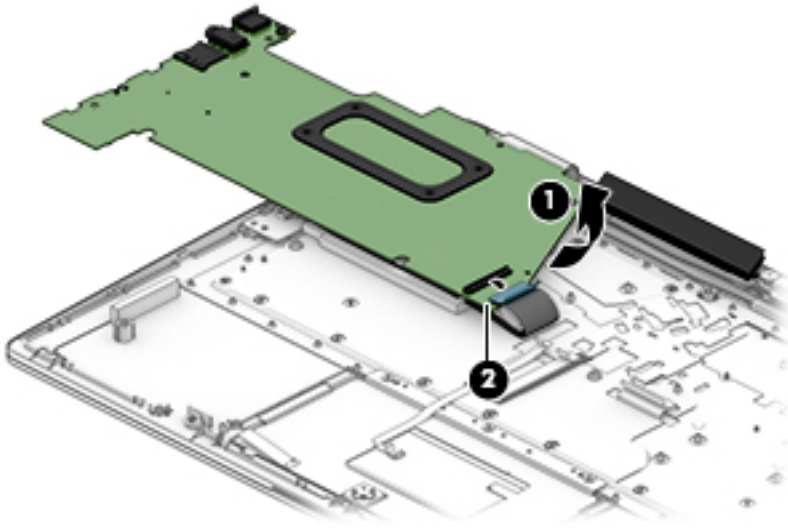


2. Remove the Phillips M2.0×3.0 screw **(1)** that secures the system board to the computer.
3. Remove the Phillips M2.0×4.0 screw **(2)** from the USB bracket.
4. Lift the side up the system board **(3)**, and then pull the system board away from the computer **(4)**.

 **TIP:** A cable connects to the bottom of the system board. Make sure not to accidentally disconnect the cable when removing the system board.



5. Turn the system board upside down (1), and then disconnect the I/O board cable from the bottom of the board (2).



Reverse this procedure to install the system board.

USB bracket, system board

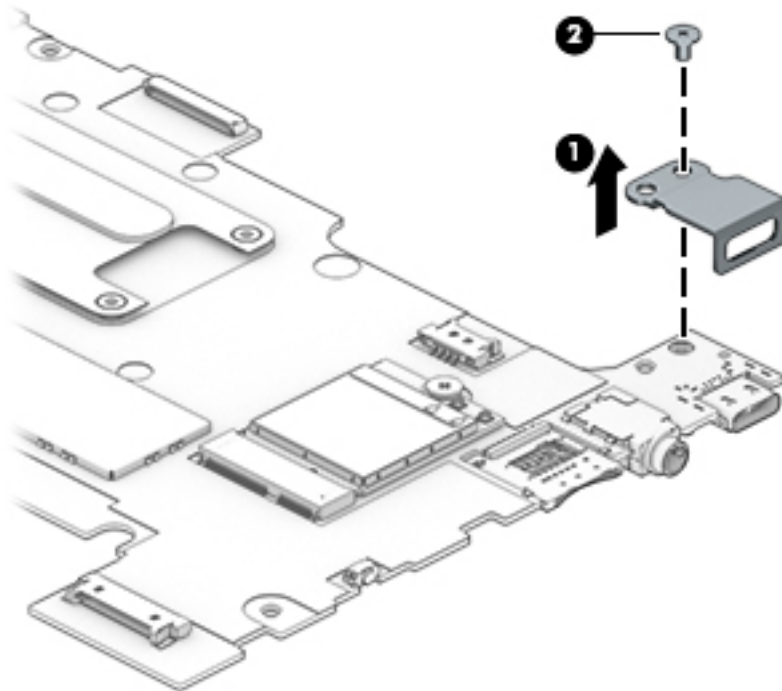
Description	Spare part number
USB bracket	L36909-001

Before removing the USB bracket from the system board, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Remove the battery (see [Battery on page 20](#)).
4. Remove the fan (see [Fan on page 23](#)).
5. Remove the system board (see [System board on page 34](#)).

Remove the USB bracket from the system board:

1. Remove the Phillips M2.0×4.0 screw **(1)** that secures the USB bracket to the system board.
2. Remove the bracket from the system board **(2)**.



Reverse this procedure to install the USB bracket onto the system board.

Speakers

Description	Spare part number
Speaker Kit (includes speaker tape)	L36896-001

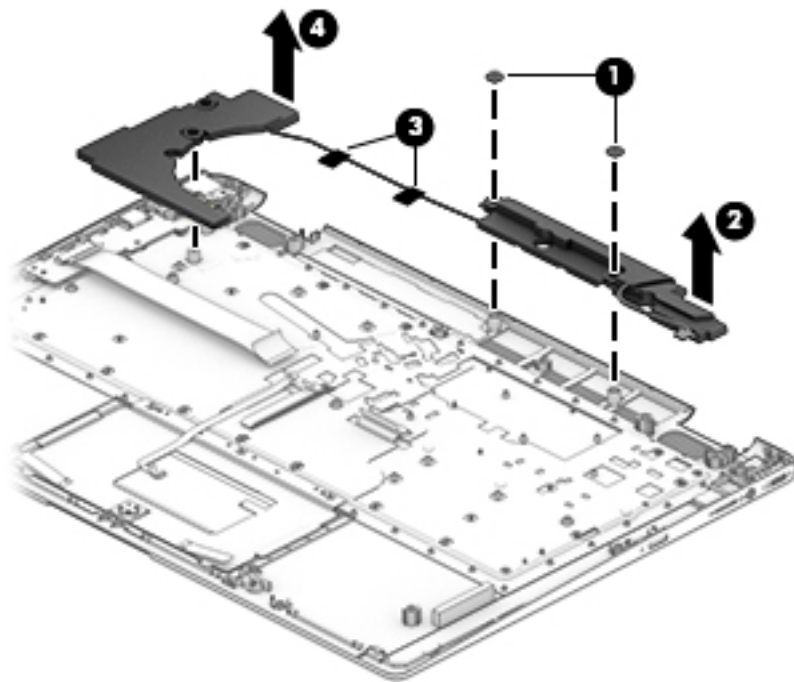
 **NOTE:** Speaker tape is included in the Miscellaneous Parts Kit, spare part number L36912-001.

Before removing the speakers, follow these steps:

1. Prepare the computer for disassembly ([Preparation for disassembly on page 18](#)).
2. Remove the bottom cover (see [Computer feet and bottom cover on page 18](#)).
3. Remove the battery (see [Battery on page 20](#)).
4. Remove the fan (see [Fan on page 23](#)).
5. Remove the display (see [Display assembly on page 28](#)).
6. Remove the system board (see [System board on page 34](#)).

Remove the speakers:

1. Remove the two Phillips M2.0×3.0 screws **(1)** that secure the left speaker to the computer.
2. Remove the left speaker from the computer **(2)**.
3. Remove the speaker cable from the clips **(3)**, and then remove the right speaker from the computer **(4)**.



Reverse this procedure to install the speakers.

Keyboard/top cover

The top cover with keyboard remains after removing all other spared parts from the computer.



NOTE: The keyboard/top cover spare part kit does not include the TouchPad or the TouchPad cable. The TouchPad spare part number L36897-001. The TouchPad cable spare part number is L36898-001.

Description	Spare part number
Keyboard for use in Belgium	L36889-A41
Keyboard for use in Denmark, Finland, and Norway	L36889-DH1
Keyboard for use in France	L36889-051
Keyboard for use in the Netherlands	L36889-B31
For use in the United Kingdom	L36889-031
For use in the United States	L36889-001


6 Backing up, resetting, and recovering

Backing up

You can back up your data to an optional USB flash drive or SD memory card or through Google Drive. For detailed information about creating a backup, go to <http://www.support.google.com>.

Resetting

A factory reset erases all the information on your computer hard drive, including all the files in the Downloads folder. Before you reset, make sure to back up your files to an optional USB flash drive, SD memory card, or through Google Drive. The factory reset will not delete any of your files on Google Drive or an external storage device.


 **IMPORTANT:** Resetting permanently erases everything on your computer hard drive, including your downloaded files. If possible, back up your files before you reset your computer.

You might want to reset your computer in the following circumstances:

- You see the message "Reset this Chrome device."
- You are having problems with your user profile or settings.
- You have tried restarting your computer, and it is still not working properly.
- You want to change the owner of your computer.

To reset your computer:


1. Under the **Settings** menu, click **Advanced**.
2. In the **Powerwash** section, click **Powerwash**.
3. Click **Restart**, and then sign in with your Google Account.


 **NOTE:** The account you sign in with after you reset your computer will be recognized as the owner account.

4. Follow the on-screen instructions to reset your computer.
5. Once you complete the reset, you can set up your computer and check to see whether the problem is fixed.

Recovering

When your Chrome operating system (OS) is not working properly, you can perform a recovery. A recovery reinstalls the operating system and software programs and restores the original factory settings. Locally saved files and saved networks are deleted for all accounts. Your Google Accounts and any data synced to your Google Drive are not affected by a system recovery.

 **IMPORTANT:** Recovery permanently erases everything on your computer hard drive, including your downloaded files. If possible, back up your files before you recover your computer.

 **NOTE:** For more information about performing a system recovery on your computer, go to <http://www.support.google.com>.

Before beginning the recovery process, you need the following:

- A USB flash drive or SD memory card with a capacity of 4 GB or greater. All data is erased from this storage device when the recovery media is created, so back up any files from the device before you begin.
- A computer with Internet access. You must also have administrative rights to the computer.
- Computer AC adapter. The computer must be plugged into AC power during recovery.
- The “Chrome OS is missing or damaged” screen displaying on your computer. If this message is not already displayed:
 - Turn on the computer, press and hold the **esc+f3** keys, and then press the power button. The computer restarts, and the screen shows the “Chrome OS is missing or damaged” screen.

Installing the Chromebook Recovery Utility

The Chromebook Recovery Utility is an app used to recover the original operating system and software programs that were installed at the factory. This utility can be installed from the Chrome Web Store on any computer.

To install the Chromebook Recovery Utility:


- ▲ Open the Chrome Web Store, search for `chrome recovery`, click **Chromebook Recovery Utility** from the Apps list, and follow the on-screen instructions.

Creating recovery media

Recovery media is used to recover the original operating system and software programs that were installed at the factory.

To create recovery media:

1. Turn on a computer with Internet access.
-
2. Click the **Launcher** icon, and then click **All Apps**.
 3. In the Apps window, click **Recovery**, and then click **Get started**.
 4. Follow the on-screen instructions to create the recovery media.

 **NOTE:** All data and partitions on your recovery media will be deleted. Do not remove the USB flash drive or SD memory card until the process is complete.

Recovering the Chrome operating system

To recover the Chrome operating system on your computer using the recovery media you created:

1. Disconnect any external devices connected to your computer, plug in the power cord, and then turn on the computer.
2. To enter recovery mode, press and hold **esc+f3**, and then press the power button. When the “Chrome OS is missing or damaged” screen displays, insert the recovery media into your computer. The recovery process begins immediately.

3. Wait while Chrome verifies the integrity of the recovery media.



NOTE: If you need to cancel the recovery during the verification process, press and hold the power button until the computer turns off. Do not disrupt the system recovery process after the verification step is complete.



NOTE: If an error message displays, you might need to run the Chrome Recovery Utility again, or use a different USB flash drive or SD memory card.

4. When the “System Recovery is complete” message displays, remove the recovery media.
The computer restarts with Chrome OS reinstalled.

Setting up your computer after a reset or recovery

After a reset or recovery is complete, perform the initial setup process. For details on setting up the computer, go to <http://www.support.google.com>.

Erase and reformat the recovery media

During the process of creating recovery media, the USB flash drive or SD memory card is formatted for use as a recovery tool. After you recover your computer, you will need to erase the recovery media if you want to reuse your USB flash drive or SD memory card to store other files. Use the steps in this section to erase the recovery media using the Chromebook Recovery Utility.

1. Click the **Launcher** icon, and then click **All Apps**.
2. In the apps window, click **Recovery**.
3. Click the **Settings** icon, and then click **Erase recovery media**.
4. Select the USB flash drive or SD memory card you inserted, click **Continue**, and then click **Erase now**.
5. After the recovery media is erased, click **Done** to close the Chromebook Recovery Utility, and then remove the USB flash drive or SD memory card.

The media is ready to be formatted using a formatting tool provided by your operating system.

7 Specifications

	Metric	U.S.
Dimensions		
Width	325.5 mm	12.81 in
Depth	227 mm	8.93 in
Height	16.05 mm	0.63 in
Weight	1680 g	3.7 lb
Temperature		
Operating	5°C to 35°C	41°F to 95°F
Nonoperating	-20°C to 60°C	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	10% to 90%	
Nonoperating	5% to 95%	
Maximum altitude (unpressurized)		
Operating	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating	-15 m to 12,192 m	-50 ft to 40,000 ft

NOTE: Applicable product safety standards specify thermal limits for plastic surfaces. The device operates well within this range of temperatures.

8 Power cord set requirements

The wide-range input feature of the computer permits it to operate from any line voltage from 100 to 120 V ac, or from 220 to 240 V ac.

The 3-conductor power cord set included with the computer meets the requirements for use in the country or region where the equipment is purchased.

Power cord sets for use in other countries or regions must meet the requirements of the country and region where the computer is used.

Requirements for all countries

The following requirements are applicable to all countries and regions:

- The length of the power cord set must be at least **1.0 m** (3.3 ft) and no more than **2.0 m** (6.5 ft).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country or region where the power cord set will be used.
- The power cord sets must have a minimum current capacity of 10 A and a nominal voltage rating of 125 or 250 V ac, as required by the power system of each country or region.
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C13 connector for mating with the appliance inlet on the back of the computer.

Requirements for specific countries and regions

Country/region	Accredited agency	Applicable note number
Argentina	IRAM	1
Australia	SAA	1
Austria	OVE	1
Belgium	CEBEC	1
Brazil	ABNT	1
Canada	CSA	2
Chile	IMQ	1
Denmark	DEMKO	1
Finland	FIMKO	1
France	UTE	1
Germany	VDE	1
India	ISI	1
Israel	SII	1
Italy	IMQ	1
Japan	JIS	3
The Netherlands	KEMA	1
New Zealand	SANZ	1
Norway	NEMKO	1
The People's Republic of China	CCC	4
Saudi Arabia	SASO	7
Singapore	PSB	1
South Africa	SABS	1
South Korea	KTL	5
Sweden	SEMKO	1
Switzerland	SEV	1
Taiwan	BSMI	6
Thailand	TISI	1
The United Kingdom	ASTA	1
The United States	UL	2

1. The flexible cord must be Type H05VV-F, 3-conductor, 0.75 mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.
2. The flexible cord must be Type SVT/SJT or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15 A, 125 V ac) or NEMA 6-15P (15 A, 250 V ac) configuration. CSA or C-UL mark. UL file number must be on each element.

Country/region	Accredited agency	Applicable note number
3.	The appliance coupler, flexible cord, and wall plug must bear a “T” mark and registration number in accordance with the Japanese Dentori Law. The flexible cord must be Type VCR, 3-conductor, 0.75 mm ² or 1.25 mm ² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard c/o (7 A, 125 V ac) configuration.	
4.	The flexible cord must be Type REV, 3-conductor, 0.75 mm ² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the CCC certification mark.	
5.	The flexible cord must be Type H05VV-F 3-conductor, 0.75 mm ² conductor size. KTL logo and individual approval number must be on each element. Corset approval number and logo must be printed on a flag label.	
6.	The flexible cord must be Type HVCTF 3-conductor, 1.25 mm ² conductor size. Power cord set fittings (appliance coupler, cable, and wall plug) must bear the BSMI certification mark.	
7.	For 127 V ac, the flexible cord must be Type SVT or SJT 3-conductor, 18 AWG, with plug NEMA 5-15P (15 A, 125 V ac), with UL and CSA or C-UL marks. For 240 V ac, the flexible cord must be Type H05VV-F 3-conductor, 0.75 mm ² or 1.00 mm ² conductor size, with plug BS 1363/A with BSI or ASTA marks.	

9 Recycling

When a non-rechargeable or rechargeable battery has reached the end of its useful life, do not dispose of the battery in general household waste. Follow the local laws and regulations in your area for battery disposal.

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, see the HP Web site at <http://www.hp.com/recycle>.

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