

rSSD Removal Guide for Enterprise

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Table of Contents

DEVICE IDENTITY INFORMATION	4
· SURFACE LAPTOP MODELS	4
· GLOSSARY OF TERMS	4
GENERAL INFORMATION, PRECAUTIONS, WARNINGS	5
· TOOLS REQUIRED	5
· GENERAL SAFETY PRECAUTIONS	6
· REPAIR-SPECIFIC PRECAUTIONS AND WARNINGS	7
· SAFETY POLICIES/PROCEDURES	8
ILLUSTRATED SERVICE PARTS LIST	9
SERVICE DIAGNOSTICS/TROUBLESHOOTING OVERVIEW	10
· SOFTWARE TOOLS	10
· HARDWARE TROUBLESHOOTING APPROACH	10
COMPONENT REMOVAL AND REPLACEMENT PROCEDURES	11
· PRIOR TO DEVICE DISASSEMBLY	11
· CURRENT BATTERY WARNING	11
STEP 1: NON-SKID FOOD PAD REMOVAL PROCESS	12
STEP 2: DEVICE C-COVER KEYBOARD REMOVAL	13
· PROCEDURE-REMOVAL PROCESS (C-COVER KEYBOARD METAL TYPE)	14
· PROCEDURE-REMOVAL PROCESS (C-COVER KEYBOARD FABRIC TYPE)	16
STEP 3: RSSD REPLACEMENT PROCESS	19
· PROCEDURE-REMOVAL (RSSD)	20
· PROCEDURE-INSTALLATION (RSSD)	20
STEP 4: DEVICE C-COVER KEYBOARD ASSEMBLY INSTALLATION	22
· PROCEDURE-INSTALLATION PROCESS (C-COVER KEYBOARD METAL TYPE)	22
· PROCEDURE-INSTALLATION PROCESS (C-COVER KEYBOARD FABRIC TYPE)	23
STEP 5: NON-SKID FOOD PAD INSTALLATION PROCESS	24
ENVIRONMENTAL COMPLIANCE REQUIREMENTS	25



Device Identity Information

Surface Laptop Models

1867 – Surface Laptop 3 - 13.5" (Fabric type Keyboard)

1868 – Surface Laptop 3 - 13.5" (Metal type Keyboard)

1872 – Surface Laptop 3 - 15" (Metal type Keyboard)

1873 – Surface Laptop 3 - 15" (Metal type Keyboard)

The model and serial number for Surface Laptop are on the bottom center closest to the display hinge point.



Glossary of Terms

The following terms are used throughout this manual:

- **Non-Skid Foot Pads** are referred to in some cases as **feet** or **foot** – Item 1 in Illustrated Service Parts list
- **C-cover Keyboard Assembly** is referred to as **C-cover** – Item 2 in Illustrated Service Parts list
- **Removable Solid-State Drive** is referred to as **rSSD** – Item 3 in Illustrated Service Parts list
- **BMR** refers to the imaging process and stands for **Bare Metal Recovery**
- **Device bottom case** is referred to as **chassis** or **D-chassis** or **D-bucket**
- **Surface Diagnostic Toolkit** is referred to as **SDT**
- **Electro-Static Discharge** is referenced as **ESD**
- **Flexible Printed Circuits** connections are referred to as **FPC**
- Sub-system components such as the **C-cover** and **rSSD** may be referred to as **FRUs** (Field Replaceable Units)
- **IPA** references Isopropyl Alcohol which should be used to clean adhesive from device as detailed within process steps. Use 99% IPA in all cases.

General Information, Precautions, Warnings

 This symbol identifies important safety and health information in this manual.

Tools Required

Microsoft Recommended Service Jigs:

- Electrostatic Discharge (ESD) safe battery cover (13.5" or 15")

Standard Service Tools:

- Anti-static wrist strap (1 MOhm resistance)
- Spudger tool
- Torx-plus screwdriver 5IP
- Isopropyl alcohol (IPA), 99%
- Isopropyl alcohol dispense bottle
- Cleaning swabs
- ESD safe tweezers
- Heavy duty suction cups (2) – 2.25"
- Plastic feeler gauge – 0.50mm
- Clamps (2), 2" spring



The tools identified on this list can be purchased from many different commercial sources, including but not limited to Amazon.com; iFixit; Chemdex, and other vendors.



General Safety Precautions

Always observe the following, general safety precautions:

- Opening and/or repairing any device can present electric shock, device damage, fire, and/or personal injury risks and other hazards. Exercise caution when undertaking these activities as described in this manual. Only qualified IT technicians to whom Microsoft has provided this manual should attempt to remove the rSSD. Only Microsoft-authorized service providers should undertake repair activities.
- Always select and use the appropriate AC power supply for a device. We recommend you use genuine Microsoft power supply units and AC power cords. A genuine Microsoft power supply unit is provided with every device.
- Use only AC power provided by a standard (mains) wall outlet. Do not use non-standard power sources, such as generators or inverters, even if the voltage and frequency appear acceptable.
- Improper use of device batteries may result in fire or explosion. Only open the enclosure on a device as outlined in this manual. Do not heat, puncture, mutilate, or dispose of devices or their batteries in fire. Do not leave or charge devices in direct sunlight or exposed to other extreme sources of heat for an extended period of time. Doing so may cause damage or melt the batteries.

For additional product safety information, including information about

- Hearing conservation
- Heat related concerns
- Choking hazard/small parts
- Interference with medical devices
- Broken glass
- Photosensitive seizures
- Musculoskeletal disorders

See aka.ms/surface-safety or the Surface app. To open the Surface app, select the Start button, enter Surface into the search box, then select the Surface app.



Repair-Specific Precautions and Warnings

- Prior to opening device, ensure device is powered off and disconnected from a power supply.
- We recommend wearing protective eyewear as a safety precaution when disassembling/re-assembling a device.
- Before opening device, always check that an anti-static wrist strap is worn and work area is properly grounded to ensure electrostatic discharge (ESD) safe environment

⚠ WARNING: It is recommended that an ESD-safe battery cover of appropriate size (either 13.5" or 15" device) be placed across the device to protect the battery from any physical contact or accidental damage whenever C-cover is removed. Ensure corners of cover are aligned with the corners of the device at all times while battery is exposed. If battery cover is misaligned during activities in any way, re-align before continuing activities.

- Check to make sure that general guidelines and ESD compliance steps are followed prior to starting activities. Refer to Prior to Device Disassembly section ([page 11](#)) for details.
- If battery damage (e.g., leaking, expansion, folds or other) is discovered during the rSSD removal process or if the battery is impacted or damaged during the removal process, activities should cease. Refer to Microsoft Operational guidelines or contact Microsoft directly for proper device disposition.
- As you remove each subassembly from the device, place the subassembly (and all accompanying screws) away from the work area to prevent damage to the device and to the subassembly.
- During all activities (excluding feet-only replacement) check to ensure that no loose articles are on the C-cover (Keyboard Assembly) or within the internals of the device when reassembling the unit.

✍ IMPORTANT: Remove rSSD (removable Solid-State Drive) whenever C-cover is removed from device. rSSD removal disconnects the battery from all device logic for safety purposes. Refer to Procedure-Removal (rSSD) section ([page 20](#)) for details.

IMPORTANT: If rSSD was previously removed, powering on the device requires that the rSSD and C-cover FRUs are installed. Refer to Procedure-Removal (rSSD) section ([page 20](#)) section for details.



Safety Policies/Procedures

Microsoft's field product safety program team is referred to as the Rapid Response Team (RRT). All device issues that may be safety related should be managed per the following instructions.

As a quick guide, any Microsoft Surface device that visually exhibits any of the following symptoms shall be immediately removed from the replacement process and delivered to your Variance Manager or IT Support Professional for notification to Microsoft RRT:

1. Any burned or melted components, traces or plastic parts on the **outside** of the device, or which otherwise exhibits heat damage, including charring seen in charging ports; and/or
2. Any burned or melted components, traces or plastic parts on the **inside** of the device, or which otherwise exhibits heat damage; and/or
3. Any accessories exhibiting melting or heat damage that are included with the Microsoft device, such as power supplies, keyboards, mice, cables, charging connectors, etc.
4. Any devices that exhibit a case that has separated apart or opened for reasons other than customer abuse (e.g., impact damage from dropping, evidence of tampering, separation caused by a malfunctioning battery).
5. Any other finding that may constitute a safety hazard to the customer, such as sharp edges on plastics.

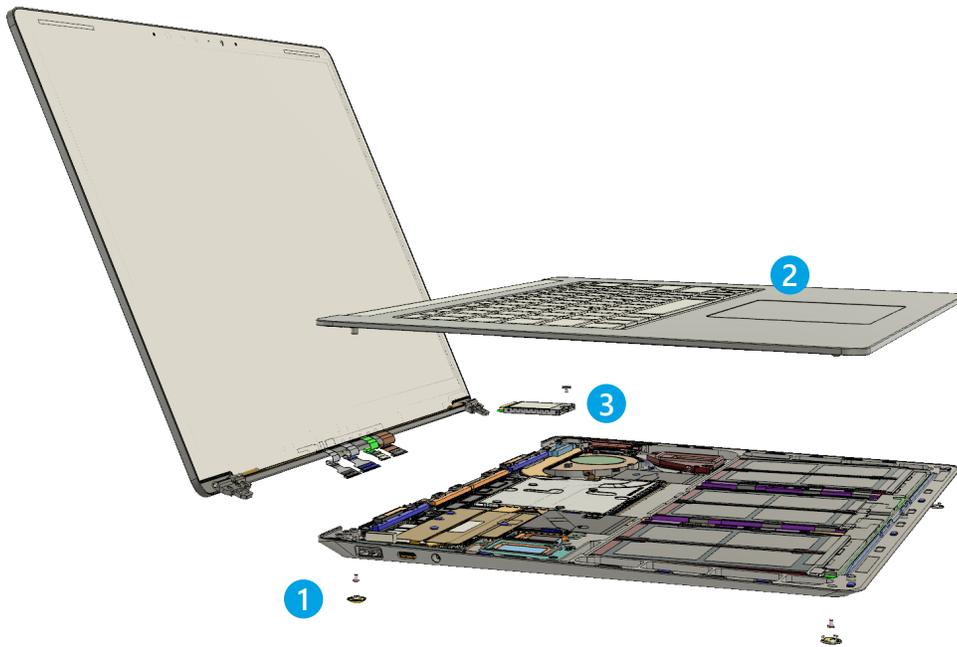
The Variance Manager or IT Support Professional must send an email with pictures showing the damage to MSSafety@microsoft.com within 24 hours of device receipt. Your email should include:

- The model and serial number of the affected Microsoft Surface device and/or accessory(ies).
- The SR (Service Request) Number that the device was received under.
- A brief description of the damage found.
- Clear photographs depicting the symptoms observed.

The Variance Manager or IT Support Specialist must await instructions from Microsoft Product Safety RRT for the affected unit before continuing with activities or returning the device to the end user.



Illustrated Service Parts List



		Model				
Item	Component	Part No.	1867	1868	1872	1873
(1)	Non-Skid Foot Pad					
	Feet WW Hdwr Black FRU Exchange	RPW-00001		X	X	X
	Feet WW Hdwr COBALT BLUE FRU Exchange	RPW-00002	X			
	Feet WW Hdwr Platinum FRU Exchange	RPW-00003	X		X	X
	Feet WW Hdwr Sandstone FRU Exchange	RPW-00004		X		



Service Diagnostics/Troubleshooting Overview

- For general Surface support, visit www.support.microsoft.com
- To troubleshoot device feature/function problems or learn more about your Surface Laptop Visit www.aka.ms/SurfaceLaptopHelp
- If you'd like to learn more about Windows, visit www.aka.ms/WindowsHelp
- To learn more about the accessibility features of the Surface Laptop, go to the online user guide at www.aka.ms/Windows-Accessibility

Software Tools:

- How To: [Update Surface device firmware and OS](#)
- How To: [Surface Tools Video](#)
- Download: [Surface drivers and firmware](#)
- Download: [Surface Diagnostic Toolkit \(SDT\)](#)
- Download: [Surface Data Eraser](#)
- Download: [Surface Imaging Tools](#)

Hardware Troubleshooting Approach

The following approach should be considered when troubleshooting Surface devices:

1. Update device to latest OS/FW versions using the SDT tool.

 **IMPORTANT:** This is a must-do prerequisite to all hardware repairs.

2. Verify any suspected hardware failures by setting the device in a known OS/FW version state and running SDT to verify fault:
 - a. Replace the device's internal rSSD with a gold imaged rSSD containing latest OS and FW updates (not supplied – must be created as a fault verification jig/tool).
 - b. Run SDT and verify if condition persists or if resolved with use of gold imaged drive – Refer to Software Tools section for details on SDT
 - i. If problem is resolved, then re-image or replace original rSSD.
 - ii. If problem persists then replace suspected hardware FRU related to the problem by following the detailed replacement procedures covered within this service manual.



Component Removal and Replacement Procedures

Prior to Device Disassembly:

- Before opening the device, always ensure device is powered off and disconnected from a power supply.
- Always ensure that the work surface is covered with an ESD-safe, soft, non-marring material.
- Work surfaces should be cleaned regularly to ensure debris/abrasive particles are not present.
- Check to make sure that general guidelines and ESD compliance steps are followed prior to opening device.

⚠ WARNING: It is recommended that an ESD-safe battery cover of appropriate size (either 13.5" or 15" device) be placed across the device to protect the battery from any physical contact or accidental damage whenever C-cover is removed. Ensure corners of cover are aligned with the corners of the device at all times while battery is exposed. If battery cover is misaligned during activities in any way, re-align before continuing activities.

! CAUTION: Check C-cover and device enclosure for any loose articles that may be present inadvertently on the C-cover or within the device enclosure.

✍ IMPORTANT: Once the rSSD has been removed, powering on the device requires that the rSSD and C-cover FRUs are installed and device must be connected to a power supply. Refer to Procedure-Removal (rSSD) section ([page 20](#)) for details.

IMPORTANT: Once the rSSD has been removed, powering on the device requires that the rSSD and C-cover FRUs are installed. Refer to Procedure-Installation (rSSD) section ([page 20](#)) for details.

Current Battery Warning

⚠ WARNING: Please note that the battery bears the following warning label. Please heed the information provided on the label.



Battery cannot be easily replaced by user

- Risk of fire or burning - contact Microsoft for assistance
- Do not separate or remove battery from backplate cover
- Do not modify battery, its wiring, or connectors
- Do not replace, short circuit, bend, crush, or puncture battery
- Do not dispose of battery in fire or expose to high temperatures (+140°F/60°C)
- For more information: <http://aka.ms/surface-security>



Step 1: Non-Skid Foot Pad Removal Process

Preliminary Requirements

 **IMPORTANT:** Be sure to follow all special (bolded) notes of caution within each process section.

Required Tools and Components

- **Tools:**
 - Spudger tool
 - Clamps (2), 2" Spring
 - Plastic Feeler Gage – 0.050mm
- **Components:**
 - Feet qty= 4 (device color specific)

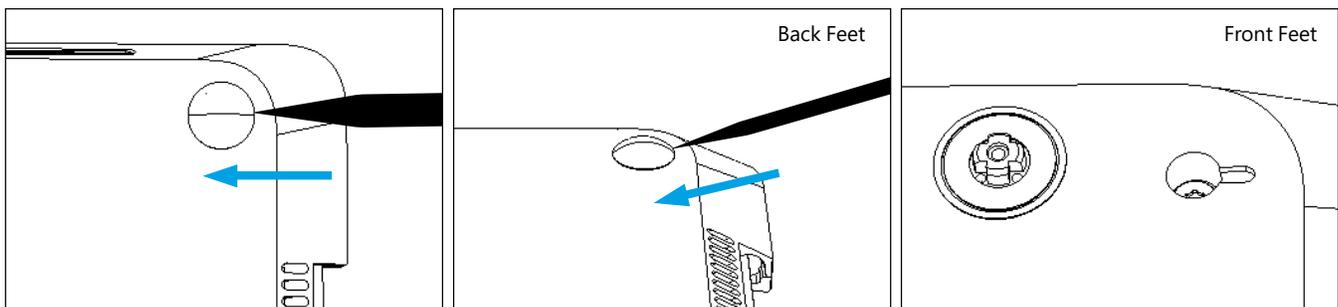
Prerequisite Steps:

- **Power off device** - Ensure device is powered off and disconnected from a power supply.
- **General Safety** - Check to make sure that general guidelines and ESD compliance steps are followed prior to opening the device. Refer to Prior to Device Disassembly section ([page 11](#)) for details.
- **Position device** - To prevent scratches, flip device over onto a clean surface free of debris with the device bottom facing up for access to the feet for removal.

 **IMPORTANT:** There are two types of feet (front and back) – refer to illustration for details.

Procedure – Removal (Non-Skid Foot Pad)

1. **Front foot removal technique** - To remove front feet, insert the pointed end of a plastic Spudger tool (pictured) from the long side of the device under the foot. There is a designed gap in the foot located at the center of the outside edge of the foot. Point the plastic tool directly in the middle of the foot starting from the front edge and push in towards the middle of the device.
2. **Back foot removal technique** - To remove back feet, perform the same steps as for the front feet but from the back side of the device and along the long edge.



3. **Adhesive removal** - Remove any adhesive liners in the foot pockets. Use IPA and cotton wipes to clean off any adhesive residue within the foot pocket.

 **IMPORTANT:** Ensure the IPA is completely dried off device and that no adhesive residue is left before applying new feet to avoid the risk insufficient adhesion of the new feet.



Step 2: Device C-cover Keyboard Removal

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- ✎ **IMPORTANT:** Surface Laptop 3 devices are built with either a fabric type or metal type C-cover keyboard assembly. The C-cover removal process differs between the metal type C-cover and the fabric type C-cover. Be sure to follow the proper procedure based on the device model and associated C-cover type.
-

Removal Process (C-cover Keyboard Metal Type)

Preliminary Requirements

-
- ✎ **IMPORTANT:** Be sure to follow all special (bolded) notes of caution within each process section.
-

Required Tools and Components

- **Tools:**
 - 5IP (Torx-Plus) driver
 - Anti-static wrist strap (1M Ohm resistance)
 - Recommended: ESD-safe Battery Cover (13.5" or 15")
- **Components:**
 - New 5IP screw qty=4
 - C-cover (If replacing)

Prerequisite Steps:

- **Power off device** - Ensure device is powered off and disconnected from a power supply.
- **General Safety** - Check to make sure that general guidelines and ESD compliance steps are followed prior to opening device. Refer to Prior to Device Disassembly section ([page 11](#)) for details.
- **Remove feet** - Follow steps for Procedure-Removal (Non-Skid Foot Pad) section ([page 12](#)) prior to C-cover removal.

-
- ✎ **IMPORTANT:** Be sure that all foot adhesive remains have been removed from the bottom device case foot sockets prior to C-cover screw removal to avoid the risk of stripping out the C-cover screw(s).
-



Procedure – Removal (C-cover Keyboard Metal Type)

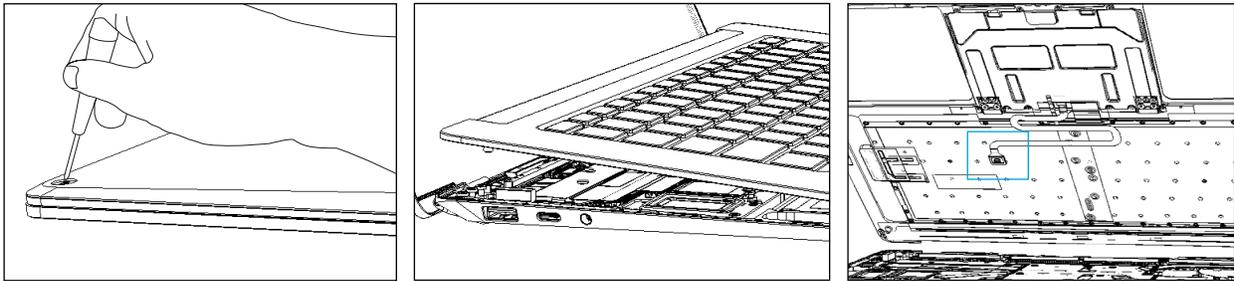
1. **Remove C-cover screws** - Using a 5IP (Torx-Plus) driver, uninstall 1 screw from each foot socket (4)

✎ **IMPORTANT:** Take caution to prevent from depressing the keyboard power button during this step. If power button is accidentally depressed and device turns on, shut down device as normal through OS Start menu.

! **CAUTION:** Ensure all (4) screws are removed from the enclosure before starting C-cover removal, otherwise there is a high risk of irreversibly damaging the C-cover

CAUTION: Remove C-Cover exactly as described in this step to avoid damaging the Flexible Printed Circuit (FPC) connected between the C-Cover and the Main Board.

CAUTION: Remove C-cover and hold in a hover position as described below to avoid damaging the display glass. Never rest the rear edge of the C-cover on the device at the display hinge point or allow the C-cover to impact or touch the display during this step.

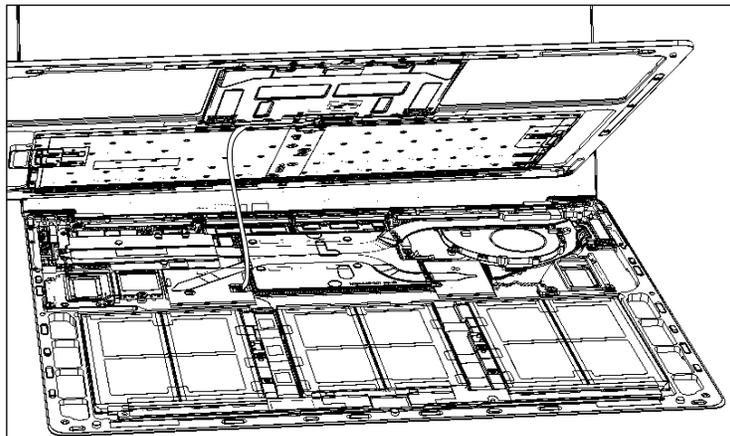


✎ **IMPORTANT:** In addition to the (4) C-cover screws, the C-cover is further secured to the device body with magnets. Further separation of the C-cover should be carried out in the following steps.

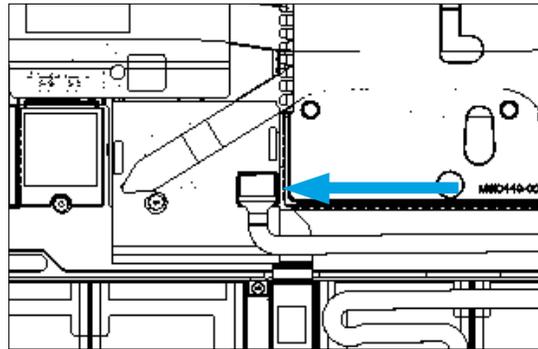
2. **Separate C-cover from device** - Place your hand in the antenna position area closest to the display and slowly remove the C-cover at an angle as shown in photo.

! **CAUTION:** Do not pull the C-cover apart beyond **45 degrees** otherwise damage to C-cover FPC could occur.

3. **Position C-cover for FPC removal** - After lifting the C-cover completely from the magnets on the device, angle and hover the C-cover so that the antenna side is facing down towards the device and C-cover FPC is accessible.

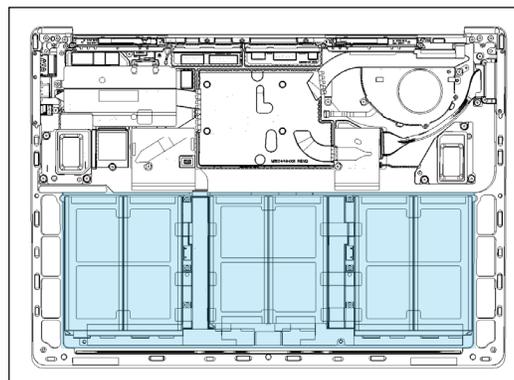


4. **Disconnect FPC** - While hovering the C-cover, disconnect the FPC from the main board with your other hand. The FPC is easily disconnected by pulling up on the metal head vertically with a fingernail or Spudger tool edge.



! **CAUTION:** When removed from the device, place the C-cover in a safe place with **key and trackpad side down and FPC facing up to avoid bending/creasing the FPC**. Be sure the key and trackpad side of the C-cover is protected from cosmetic damage during storage.

⚠ **WARNING:** It is recommended that an ESD-safe battery cover of appropriate size (either 13.5" or 15" device) be placed across the device to protect the battery from any physical contact or accidental damage whenever C-cover is removed. Ensure corners of cover are aligned with the corners of the device at all times while battery is exposed. If battery cover is misaligned during activities in any way, re-align before continuing activities.



📄 **IMPORTANT:** Remove rSSD (removable Solid-State Drive) whenever C-cover is removed from device. rSSD removal disconnects the battery from all device logic for safety purposes. Refer to Procedure-Removal (rSSD) section ([page 20](#)) for details.



Procedure - Removal Process (C-cover Keyboard Fabric Type)

Preliminary Requirements:

 **IMPORTANT:** Be sure to follow all special (bolded) notes of caution within each process section.

Required Tools and Components

- **Tools:**
 - 5IP (Torx-Plus) driver
 - Heavy Duty iFixit suction cups (if fabric C-cover)
 - Anti-static wrist strap (1 MOhm resistance)
 - Recommended: ESD-safe battery cover (13.5" or 15")
- **Components:**
 - New 5IP screw x4
 - C-cover (If replacing)

Prerequisite Steps:

- **Power off device** - Ensure device is powered off and disconnected from a power supply.
- **General Safety** - Check to make sure that general guidelines and ESD compliance steps are followed prior to opening the device. Refer to Refer to Prior to Device Disassembly section ([page 11](#)) for details.
- **Remove feet** - Follow steps for Procedure-Removal (Non-Skid Foot Pad) section ([page 12](#)) prior to C-cover removal.

 **IMPORTANT:** Be sure that all foot adhesive remains have been removed from the bottom device case foot sockets prior to C-cover screw removal to avoid the risk of stripping out the C-cover screw(s).

Procedure – Removal (C-cover Keyboard Fabric Type)

1. **Remove C-cover screws** - Using a 5IP (Torx-Plus) driver, uninstall 1 screw from each foot socket (4).

! **CAUTION:** The fabric type C-cover needs to be disassembled through a different process than for metal type C-covers. This is because fabric C-covers have a hook latching onto the chassis whereas metal C-covers do not. See illustration for details.

 **IMPORTANT:** Take caution to prevent from depressing the keyboard power button during this step. If power button is accidentally depressed and device turns on, shut down device as normal through OS Start menu.

! **CAUTION:** Ensure all (4) screws are removed from the enclosure before starting C-cover disassembly, otherwise there is a high risk of irreversibly damaging the C-cover.

CAUTION: Remove C-Cover exactly as described in this step to avoid damaging the FPC connected between the C-Cover and the Main Board.

CAUTION: Remove C-cover and hold in a hover position as described below to avoid damaging the display glass. Never rest the rear edge of the C-cover on the device at the display hinge point.

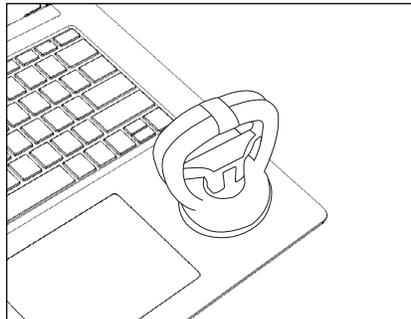
 **IMPORTANT:** In addition to the (4) C-cover screws, the C-cover is further secured to the device body with magnets. Further separation of the C-cover should be carried out in the following steps.



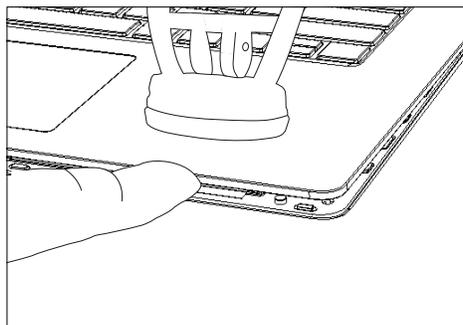
- 2. Apply suction cups** - Place suction cup in the Bottom palm rest area as shown, as close to the edge as possible.

! **CAUTION:** Do not place suction cup on Trackpad to avoid potential damage to the Trackpad.

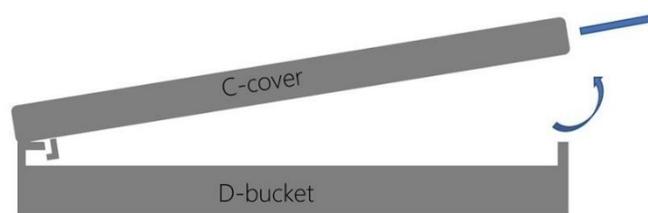
CAUTION: Do not wet the suction cup in any way as liquid could stain the keyboard fabric. Place thumb holding down the corner hinge side of the cover closest to the user as shown. Keep pressure on the hinge area to prevent back edge of cover from lifting up while pulling up on the suction cup. Be careful to prevent back edge from lifting up. If suction cup releases before C-cover is separated from device bottom case then re-attach suction cup and try again.



- 3. Separate C-cover from device** - Once C-cover separation from the device bottom case is achieved, place a finger between the C-cover and device region and pull upwards **slightly** to separate the C-cover from the magnets.



- 4. Angle C-cover** - Angle the C-cover at approximately 45 degrees from horizontal—be sure to angle the C-cover **no more than 45 degrees** or else risk damaging the C-cover hook or FPC. If hook is damaged, the hook needs to be removed carefully to avoid damaging the FPCs, and then a new C-cover needs to be installed.
- 5. C-cover hook clearance** - Once angled, keep the angle of the C-cover while pulling the C-cover directly towards yourself. Be sure to avoid pressing on the power button during this procedure.



Side View

- 6. Lift and hover C-cover** - After lifting the C-cover completely from the magnets on the device, angle and hover the C-cover so that the antenna side is facing down towards the device.

7. **Disconnect FPC** - While hovering the C-cover, disconnect the FPC from the main board with your other hand. The FPC is easily disconnected by pulling up on the metal head vertically with a fingernail or Spudger tool edge. Refer to illustrations in previous section.

! **CAUTION:** When removed from the device, place the C-cover in a safe place with **key and trackpad side down and FPC facing up to avoid bending/creasing the FPC**. Be sure the key and trackpad side of the C-cover is protected from cosmetic damage during storage.

⚠ **WARNING:** It is recommended that an ESD-safe battery cover of appropriate size (either 13.5" or 15" device) be placed across the device to protect the battery from any physical contact or accidental damage whenever C-cover is removed. Ensure corners of cover are aligned with the corners of the device at all times while battery is exposed. If battery cover is misaligned during activities in any way, re-align before continuing activities.

📄 **IMPORTANT:** Remove rSSD (removable Solid-State Drive) whenever C-cover is removed from device. rSSD removal disconnects the battery from all device logic for safety purposes. Refer to Procedure-Removal (rSSD) section ([page 20](#)) for details.



Step 3: rSSD Replacement Process

Preliminary Requirements:

-
- ! **CAUTION:** Be sure to follow all special (bolded) notes of caution within each process section.
-

Required Tools and Components

- **Tools:**
 - Torx-plus 5 screwdriver (5IP)
 - Anti-static wrist strap (1 MOhm resistance)
 - ESD safe battery cover (13.5" or 15")
- **Components:**
 - New 3IP screw
 - rSSD (If replacing)

Prerequisite Steps:

- **Power off device** - Ensure device is powered off and disconnected from a power supply.
- **General Safety** - Check to make sure that general guidelines and ESD compliance steps are followed prior to opening the device. Refer to Prior to Device Disassembly section ([page 11](#)) for details.
- **Remove feet** - Follow steps for Procedure-Removal (Non-Skid Foot Pad) section ([page 12](#)) prior to C-cover removal.

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- ✍ **IMPORTANT:** Be sure that all foot adhesive remains have been removed from the bottom device case foot sockets prior to C-cover screw removal to avoid the risk of stripping out the C-cover screw(s).
-

- **Remove C-cover** - Follow steps for Device C-cover Keyboard Removal (fabric or metal type) section ([page 13](#)).

-
- ⚠ **WARNING:** It is recommended that an ESD-safe battery cover of appropriate size (either 13.5" or 15" device) be placed across the device to protect the battery from any physical contact or accidental damage whenever C-cover is removed. Ensure corners of cover are aligned with the corners of the device at all times while battery is exposed. If battery cover is misaligned during activities in any way, re-align before continuing activities.
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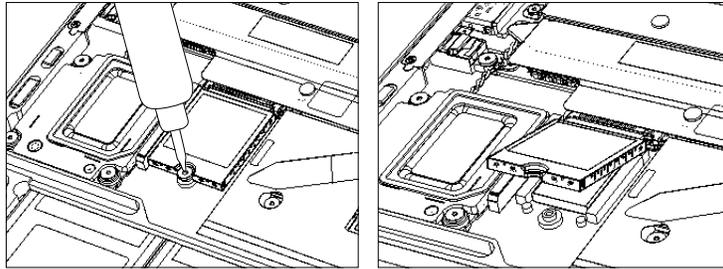
Procedure – Removal (rSSD)

1. **Remove rSSD 5IP Screw** - Use a 5IP (Torx-Plus) driver to remove the screw securing the rSSD.

⚠ WARNING: Be very careful to position your screwdriver directly over the rSSD screw and to avoid slipping towards the battery during removal. If the battery is contacted, impacted, or damaged in any way during the rSSD removal process, activities should immediately cease, and designated return process should be followed.

2. **Remove rSSD** - The rSSD should lift upwards to ~15 deg tilt after screw is removed. Carefully grab sides of rSSD case and pull out of main board socket at same ~15 deg angle.

📌 IMPORTANT: Confirm condition of thermal pillow that resides beneath the rSSD once rSSD has been removed. Thermal pillow should maintain good contact with an installed rSSD and should not have physical evidence of deterioration such as collapsing, excessive cracking etc. The outside mylar layer of the foam should be intact and no foam should be visible when viewed from above.



Procedure – Installation (rSSD)

If an rSSD is being replaced in the device, follow the steps in this section, otherwise skip to the next section for re-assembly of device prior to return to Microsoft.

📌 IMPORTANT: Only a Microsoft rSSD with part number as specified in the parts list, by device model, and of like capacity should be replaced in the device.

1. **Insert rSSD** - Insert the connector end of the rSSD into the rSSD connector on Main board at ~15degree angle.
2. **Install rSSD new 5IP screw** - Use a 5IP screwdriver to install a new rSSD screw until the screw is just snug and seated, and then turned another 45 degrees (1/8 turn) or until screw is fully fastened.

⚠ WARNING: Be very careful to position your screwdriver directly over the rSSD screw and to avoid slipping towards the battery during removal. If the battery is contacted, impacted, or damaged in any way during the rSSD removal process, activities should immediately cease, and designated return process should be followed.

3. **Install C-cover** - Follow steps for Device C-cover Keyboard Assembly Installation section ([page 22](#))

! CAUTION: Check C-cover and device enclosure for any loose articles that may be present inadvertently on the C-cover or within the device enclosure areas.

4. **Imaging** – Image the new rSSD by using a BMR Imaging key specific to the device model.



IMPORTANT: Refer to Surface imaging process - Surface Imaging Tools [Link](#)

IMPORTANT: Once the rSSD has been removed, powering on the device requires that the rSSD and C-cover FRUs are installed and device must be connected to a power supply. Refer to Procedure-Installation (rSSD) section ([page 23](#)) for details.

5. **Run SDT** - Run SDT to ensure all device features and functions operate as expected.

6. **Install feet** - If SDT tests pass and no further actions are to be performed on the device, follow steps for Procedure – Installation (Non-Skid Foot Pad [[page 24](#)]).



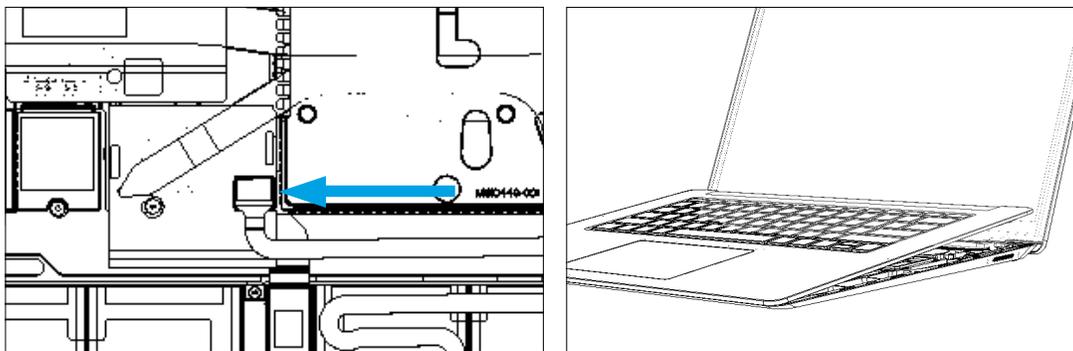
Step 4: Device C-cover Keyboard Assembly Installation

 **IMPORTANT:** Follow the respective C-cover Keyboard Assembly process in accordance with the type of C-cover the device has (metal versus fabric) below.

Procedure – Installation Process (C-cover Keyboard Metal Type)

1. **Remove battery cover if used**
2. **Check for unexpected items within device** - Check C-cover (both sides) and device enclosure for any loose articles that may be present inadvertently on the C-cover or within the device enclosure areas.
 - a. Check and remove any foreign objects that the magnets may have attracted or that may have been accidentally introduced into the device during replacement.
 - b. Carefully inspect the area around battery specifically for any foreign objects before installing C-cover back on device.
3. **Connect C-cover FPC** - Hover the C-cover over the device while assembling the C-cover FPC to the main board by pressing connection using your finger.

! **CAUTION:** Be sure that FPC bends fall in place properly as pre-bent and no folds or creases are created during re-assembly of C-cover.



4. **Align the C-cover** - Properly align the cover to the unit using the front edge alignment posts. Carefully place the C-cover back onto the unit and shift until the C-cover snaps into place.

! **CAUTION:** Ensure that the C-cover is correctly aligned and seated **before** closing the device. There is the risk of breaking the display if the device lid is closed before C-cover is aligned.

5. **Install C-cover Screws** - Turn the unit over and use a 5IP screwdriver to install **(4) screws** to secure the keyboard cover. Screws should be installed until just snug and seated, and then turned another 45 degrees (1/8 turn) or until fully fastened.

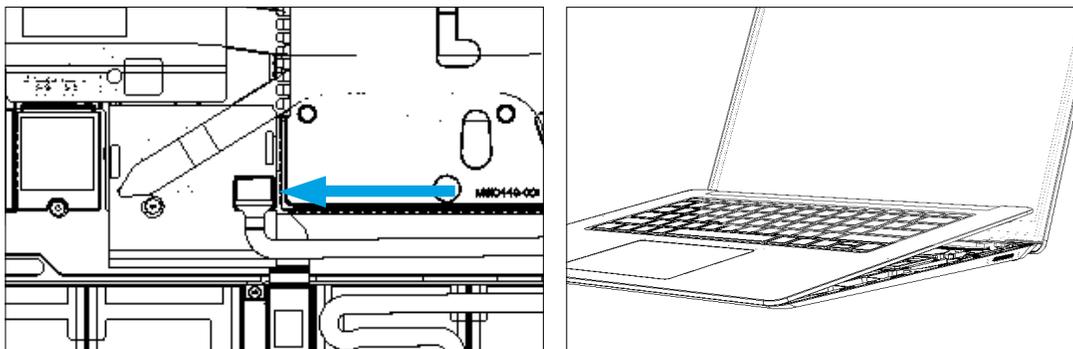
 **IMPORTANT:** Once the rSSD has been removed, powering on the device requires that the rSSD and C-cover FRUs are installed. Refer to Procedure-Installation (rSSD) section ([page 20](#)) for details.

6. **Run SDT** - If the device is not being returned to Microsoft for exchange and If an rSSD has been installed back into device, Run SDT to ensure all device features and functions operate as expected.
7. **Install Feet** - (Skip this step if device is being returned to Microsoft for exchange.) Follow steps for Procedure – Installation (Non-Skid Foot Pad [[page 24](#)]).



Procedure – Installation Process (C-cover Keyboard Fabric Type)

1. **Remove battery cover if used**
2. **Check for unexpected items within device** - Check C-cover (both sides) and device enclosure for any loose articles that may be present inadvertently on the C-cover or within the device enclosure areas.
 - a. Check and remove any foreign objects that the magnets may have attracted or that may have been accidentally introduced into the device during replacement.
 - b. Carefully inspect the area around battery specifically for any foreign objects before installing C-cover back on device.
3. **Connect C-cover FPC** - Hover the C-cover over the device while assembling the C-cover FPC to the main board by pressing connection using your finger.



! **CAUTION:** Be sure that FPC bends fall in place properly as pre-bent and no folds or creases are created during re-assembly of C-cover.

4. **Align the C-cover** - Properly align the cover to the unit using the front edge alignment posts. Carefully place the C-cover back onto the unit and shift until the C-cover snaps into place.

! **CAUTION:** Ensure that the C-cover is correctly aligned and seated **before** closing the device. There is the risk of breaking the display if the device lid is closed before C-cover is aligned.

5. **Install C-cover Screws** - Turn the unit over and use a 5IP screwdriver to install **(4) screws** to secure the keyboard cover. Screws should be installed until just snug and seated, and then turned another 45 degrees (1/8 turn) or until fully fastened.

✎ **IMPORTANT:** Once the rSSD has been removed, powering on the device requires that the rSSD and C-cover FRUs are installed. Refer to Procedure-Installation (rSSD) section ([page 20](#)) for details.

6. **Run SDT** - If the device is not being returned to Microsoft for exchange and If an rSSD has been installed back into device, Run SDT to ensure all device features and functions operate as expected.
7. **Install Feet** - (Skip this step if device is being returned to Microsoft for exchange.) Follow steps for Procedure – Installation (Non-Skid Foot Pad [[page 24](#)]).

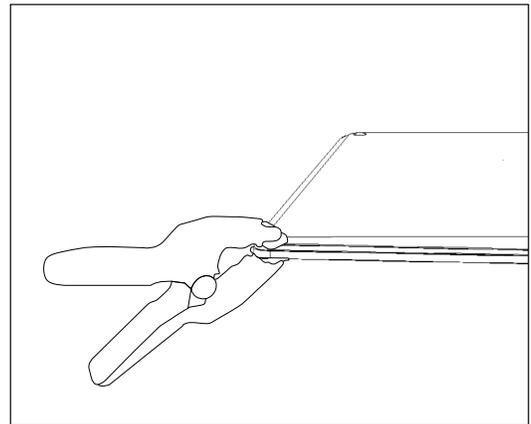
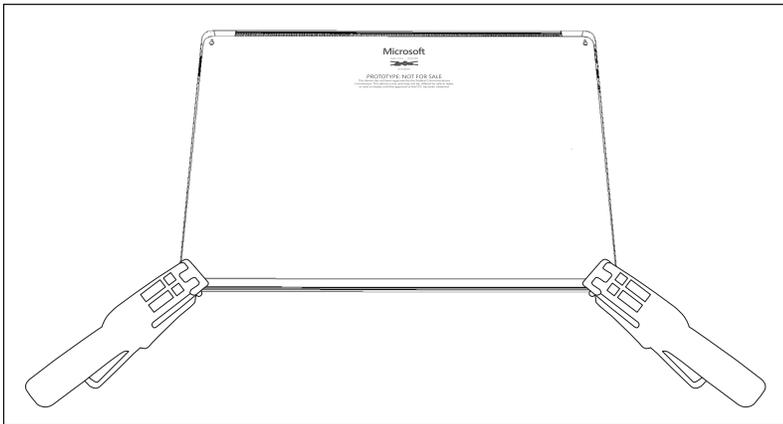


Step 5: Non-Skid Foot Pad Installation Process

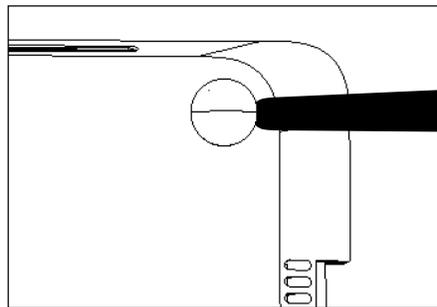
Procedure - Installation (Non-Skid Food Pad)

 **IMPORTANT:** Do not reuse feet previously removed from a device unless device will be returned for exchange. New feet must be used or the adhesive on the feet will not properly adhere to the device.

1. **Prepare new front feet and press into place** - To reassemble front foot, remove protective sheet to expose adhesive on foot. Align the 3 posts with their respective pockets on the bottom side of the unit and hand press the foot in until the foot sits flat. Complete previous steps for the other front foot.
2. **Clamp replaced feet** - Align and center the press head of the clamp onto the front feet. Clamp **both** of the front feet and allow to remain for 4 minutes before releasing the clamp..



3. **Inspect for anomalies** - Inspect feet after removing clamps to ensure no cosmetic damage or gaps between the foot and the chassis exist
 - a. If gap exists, use a feeler gage to check if the gap is smaller than 0.050 mm. If gap is larger, replace foot



4. **Prepare new back feet and press into place** - To reassemble the back feet, remove protective sheet to expose adhesive on foot. Insert the foot into the pocket on the bottom side of the unit and hand press the foot in until the foot sits flat
5. **Clamp replaced feet** - Align and center the press head of the clamp onto the back feet. Clamp both the back feet down and allow to remain for 4 minutes before releasing the clamp.
6. **Cosmetic Inspection** - Inspect feet after removing clamps to ensure no cosmetic damage or gaps exist



Environmental Compliance Requirements

You can find important recycling and regulatory information about your Surface device online at aka.ms/surface-regulatory or in the Surface app.

All waste materials, including waste electrical and electronic and electric equipment (WEEE) and batteries, must be managed according to applicable laws and regulations and Microsoft standards and requirements, including H09117 (Available for download at [Link](#)). In case of questions, please contact AskECT@microsoft.com

