



# Surface Laptop Go SSD Removal Procedure



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This document and the information it contains are subject to change without notice. You can find the latest information on Surface device servicing and repair at <https://aka.ms/surfaceservicing>. Always consult the most up-to-date information available before performing device related activities.

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## Device Identity Information

### Surface Laptop Models

1943 – Surface Laptop Go

Surface Support – Laptop Go: [Link](#)

Surface Laptop Go Technical Specifications: [Surface Laptop Go](#)

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



## Glossary of Terms

The following terms are used throughout this guide.

- **Feet** or **Foot** – Non-Skid Foot Pads
- **C-cover** – Keyboard Trackpad Assembly
- **SSD** – Solid-State Drive
- **BMR** – Bare Metal Recovery refers to the clean imaging process.
- **Chassis** or **D-chassis** or **D-bucket** – Device bottom case
- **SDT** – Surface Diagnostic Toolkit
- **TIM** – Thermal Interface Material
- **ESD** – Electro-Static Discharge
- **FPC** – Flexible Printed Circuits connections.
- **IPA** – Isopropyl alcohol which should be used to clean adhesive from device as detailed within process steps. Use 70% IPA in all cases.



## General Information, Precautions, Warnings

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

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### Tools and Jigs

#### Microsoft Recommended Jigs

- ESD-safe battery cover

#### Microsoft Provided Software Tools / References:

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

#### Standard Tools:

- Anti-static wrist strap (1 MOhm resistance)
- ESD-safe benchtop
- Spudger tool
- Plastic Opening Pick
- Plastic Opening tool
- Phillips drivers PH0, PH00
- Isopropyl alcohol dispenser bottle (use 70% IPA)
- Cleaning swabs
- ESD-safe tweezers
- ESD-safe battery cover or shield
- Lint free cleaning cloths

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 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 skilled IT technicians should undertake activities detailed within this guide.
- Do not attempt to open a device if you have received a report indicating the device has emitted “smoke” or if it exhibits melting or other heat damage on the device casing. Contact Microsoft directly for information about proper device disposition.
- Do not attempt to open a device that has experienced an expanded or otherwise damaged battery. Contact Microsoft directly for information about proper device disposition.
- 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 impact, deform, or bend device batteries. 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 or result in exothermic battery failure.

For additional product safety information, including information about

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

See [aka.ms/surface-safety](https://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.



## 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.

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 **WARNING:** It is recommended that an ESD-safe battery cover of appropriate size 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 always aligned with the corners of the device while battery is exposed. If battery cover is misaligned during activities, re-align before continuing work.

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- Check to make sure that general guidelines and ESD compliance steps are followed prior to starting activities. Refer to Prior to Device Disassembly section on [page 11](#) for details.
- Do not attempt to open a device if you have received a report indicating the device has emitted “smoke” or if it exhibits melting or other heat damage on the device casing. Contact Microsoft directly for information about proper device disposition.
- Do not attempt to open a device that has experienced an expanded or otherwise damaged battery. Contact Microsoft directly for information about proper device disposition.
- If battery damage (e.g., leaking, expansion, folds or other) is discovered during the C-cover removal process or if the battery is impacted or damaged in any way during the SSD recovery process, activities should cease. Contact Microsoft directly for information about 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 check to ensure that no loose articles are on the C-cover (Keyboard Assembly) or within the internals of the device before reassembling the unit.

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 **IMPORTANT:** Ensure battery FPC remains disconnected from the PCBA whenever C-cover is removed from device for safety purposes. Refer to SSD Removal Process for further details.

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## 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.

Contact Microsoft IT Professional Support at the link below if a Microsoft Surface device visually exhibits any of the following symptoms: [Microsoft Surface for IT professionals](#)

- 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 and other ports.
- Any burned or melted components, traces or plastic parts on the **inside** of the device, or which otherwise exhibits heat damage.
- Any accessories exhibiting melting or heat damage that are included with the Microsoft device, such as power supplies, keyboards, mice, cables, charging connectors, etc.
- 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).
- Any other finding that may constitute a safety hazard to the user, such as sharp edges on plastics.

Have the following information available at the time of contact or include in email communications:

- The model and serial number of the affected Microsoft Surface device and/or accessory(ies).
- A brief description of the damage found.
- Clear photographs depicting the symptoms observed.

Guidance will be provided by the Microsoft support team on where to send device.



## Diagnostics/Troubleshooting Overview

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

## Verify Hardware Functionality

The following approach should be taken when verifying Surface device functionality:

1. Update device to latest OS/FW versions using the SDT tool – Refer to Software Tools section above for details on SDT.
2. Verify any suspected hardware failures by running SDT to verify fault:
  - a. Run SDT and verify if condition persists or if resolved with use of BMR imaged drive – Refer to Software Tools section above for details on SDT.
    - i. If problem is resolved, then re-image original SSD as needed.
    - ii. If problem persists then remove the SSD as detailed in this guide, and send the device to Microsoft.



## SSD Removal and Reassembly 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.

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⚠ **WARNING:** It is recommended that an ESD-safe battery cover 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 always aligned with the corners of the device while battery is exposed. If battery cover is misaligned during activities in any way, re-align before continuing work.

! **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:** Ensure battery FPC remains disconnected from the PCBA whenever C-cover is removed from device for safety purposes. Refer to Procedure-Removal (C-Cover) for further details.

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### 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>



# SSD Removal Process

## Preliminary Requirements

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- ✍ **IMPORTANT:** Be sure to follow all special (bolded) notes of caution within each process section.
  - ✍ **IMPORTANT:** SSD re-installation should not be carried out. SSD replacement or swap should not be attempted. It may damage the device or pose safety concerns for users. Damage to the device(s) caused during the process will not be covered under warranty.
- 

## Required Tools and Components

- Tools:
  - Software Tool – SDT
  - Plastic tweezers
  - Plastic Opening Pick
  - Plastic Opening tool
  - Isopropyl Alcohol Dispenser (use only 70% IPA)
  - Screwdriver (PH0 driver bit for C-cover)
  - Screwdriver (PH00 driver bit for all internal screws)
  - Anti-static wrist strap (1M Ohm resistance)
  - ESD-safe battery cover

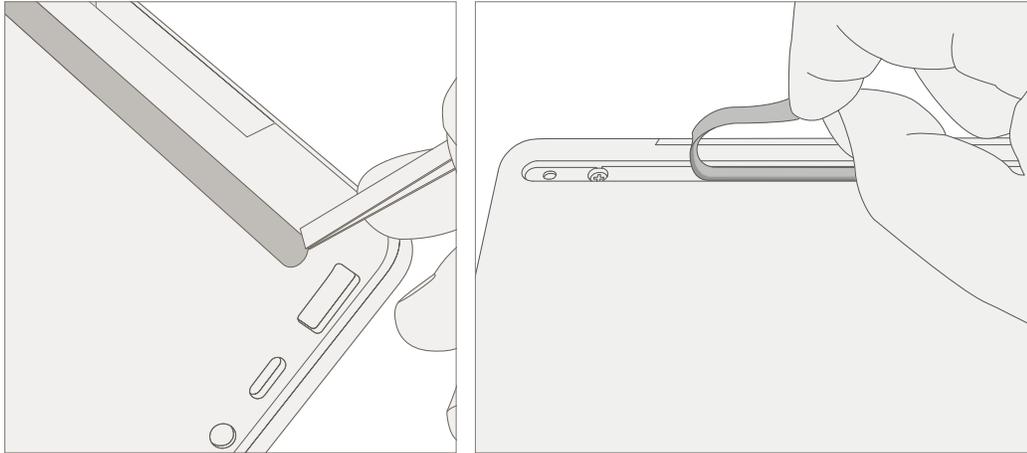
## Prerequisite Steps:

- **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.

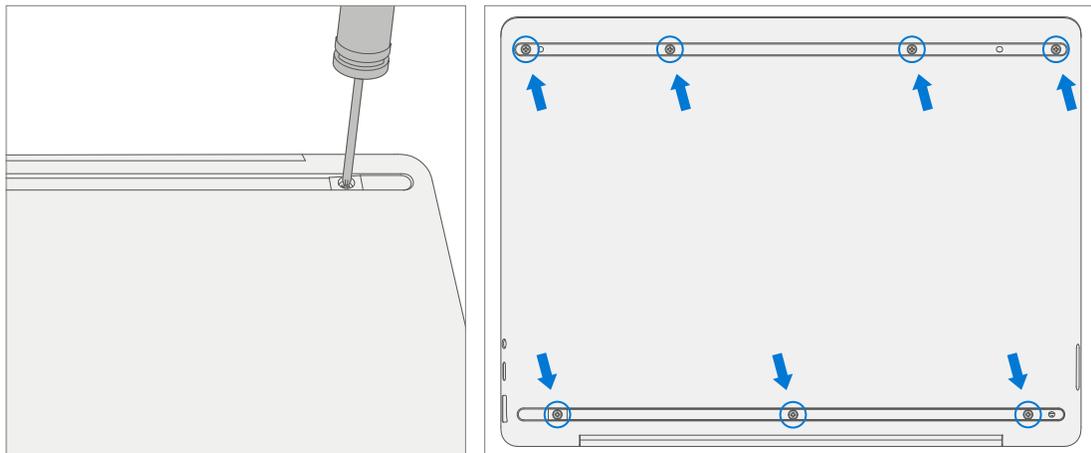


## Process Steps:

1. **Feet removal** – Use plastic tweezers / spudger to lift one edge of each foot. Grasp the loose end and pull the foot from the D-bucket. Ensure all adhesive tape remnants and glue residue are removed. Clean the D-bucket foot recesses with 70% Isopropyl Alcohol.



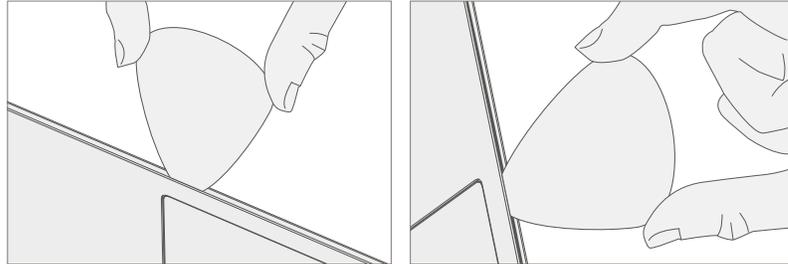
2. **Remove C-cover screws** – Using a PH0 screwdriver uninstall the three screws from the rear, and four screws from the front D-bucket foot recesses. Prior to unscrewing, ensure the driver head is seated correctly in the screw recess by lightly turning the driver clockwise until it can be felt engaging fully with the screw.



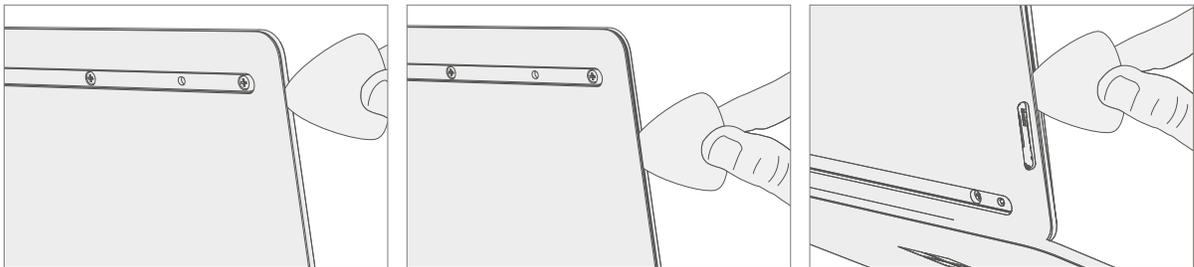
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- ! **CAUTION:** Ensure all (7) screws are removed from the enclosure before starting C-cover removal, otherwise there is a high risk of irreversibly damaging the C-cover and D-bucket.
  - ! **CAUTION:** Ensure the plastic pick depth into the C-Cover is kept shallow to avoid damaging internal features.
  - ! **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. Do not pull the C-cover apart beyond **45 degrees** otherwise damage to C-cover FPC could occur.
  - ! **CAUTION:** Remove C-cover and hold in a hover position as described 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.
-

3. **Separate C-cover from device** – Using a plastic opening tool, slowly pry C-cover upwards to unsnap the hook and snap features.

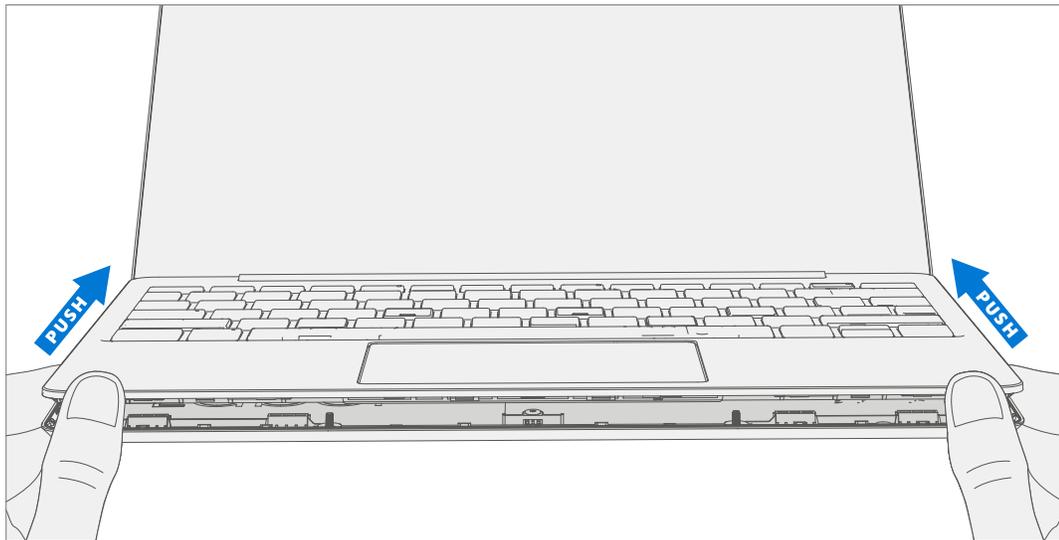
a. Disassemble hooks from the front of the device first by prying upwards with the plastic tool.



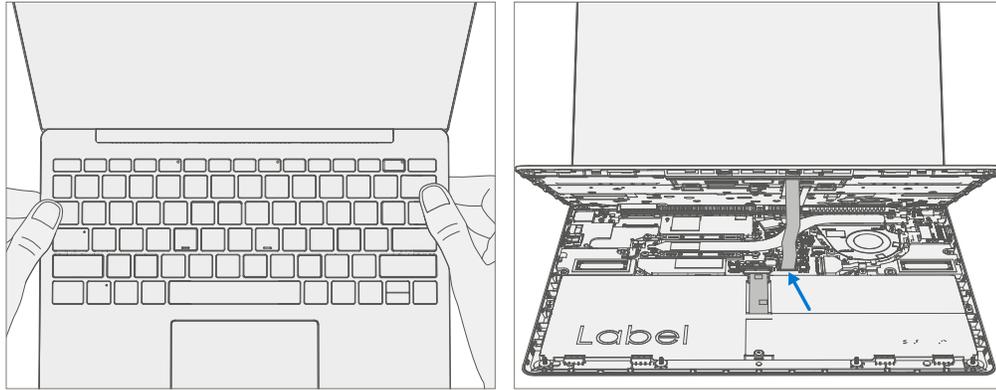
b. Pry up on the hooks on the left and right sides of the device, working from the front of the device to the back.



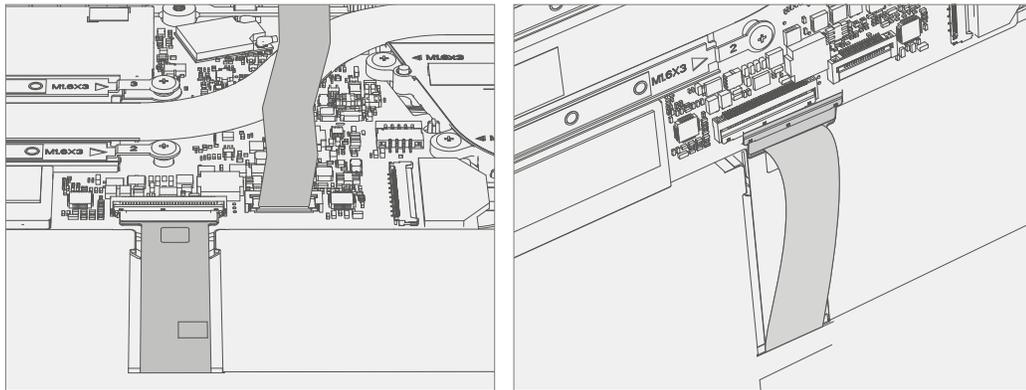
c. Open the device to its maximum angle and tilt it backwards. Press the C-cover towards the display as shown to unsnap the remaining hooks.



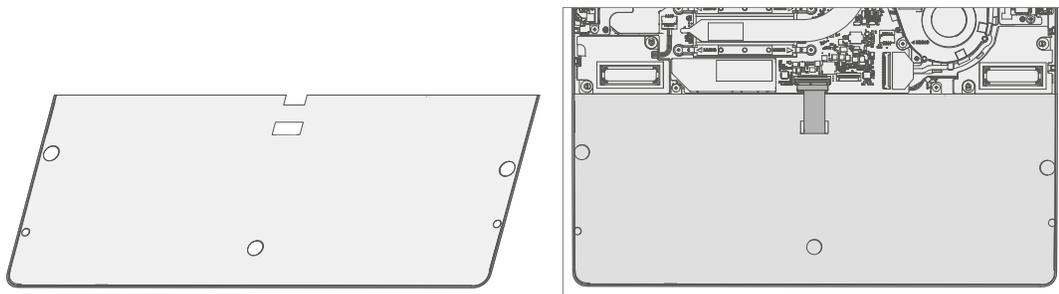
4. **Position C-cover for FPC removal** – After lifting the C-cover completely from the D-bucket, angle and hover the C-cover so that the far side is facing down towards the device and C-cover FPC is accessible.



5. **Disconnect FPCs** – While hovering the C-cover, disconnect the battery and then the C-Cover FPC from the main board. Using a Spudger in your other hand pull up on the FPC connector's locking tabs and slide the FPC's from the connectors.



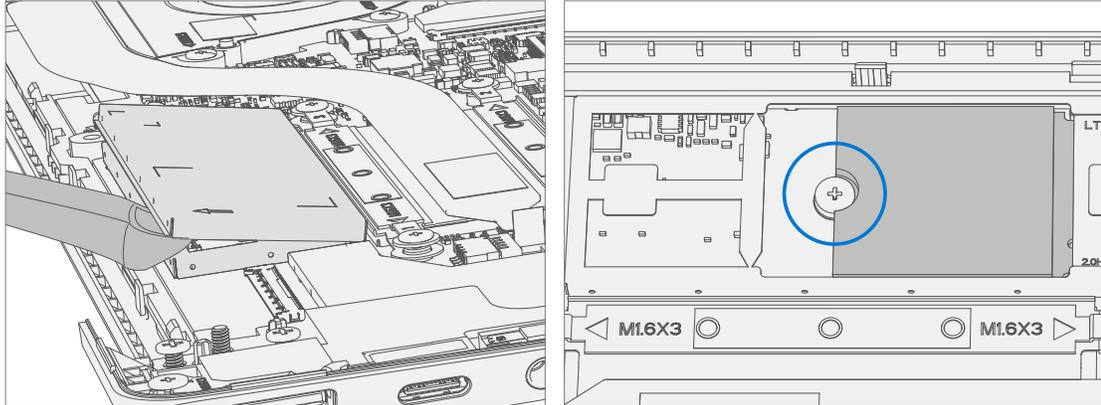
**⚠ WARNING:** It is recommended that an ESD-safe battery cover be placed across the device to protect the battery from any physical contact or accidental damage whenever C-cover is removed. Ensure corners of cover are always aligned with the corners of the device while battery is exposed. If battery cover is misaligned during activities in any way, re-align before continuing work.



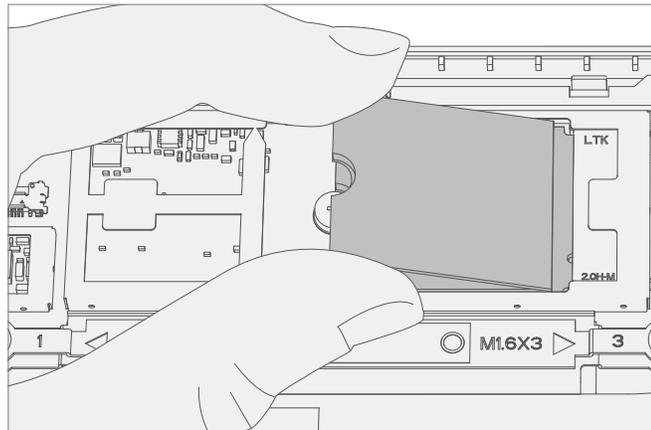
**! CAUTION:** When removed from the device, place the C-cover in a safe place with key and trackpad side down and FPC facing up to avoid bending/creasing the FPC. Be sure the key and trackpad side of the C-cover is protected from cosmetic damage during storage.

**📝 IMPORTANT:** Ensure battery FPC remains disconnected from the PCBA whenever C-cover is removed from device for safety purposes.

6. **Remove SSD Shielding cover and Screw** – Use the plastic opening tool to pry up shielding cover. Slide the tool under the lip on the top side of the shield. Use a PH00 screwdriver to remove the screw securing the SSD.

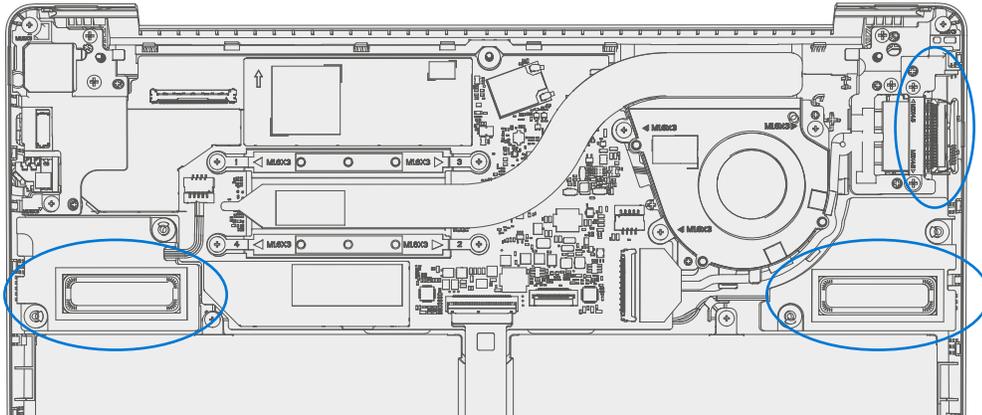


7. **Clean TIM Residue** – Inspect SSD for TIM residue. Carefully wipe away any residue with 70% IPA solution.
8. **Remove SSD** – Carefully grab sides of SSD case and pull out of the mainboard socket at ~15 degree angle.

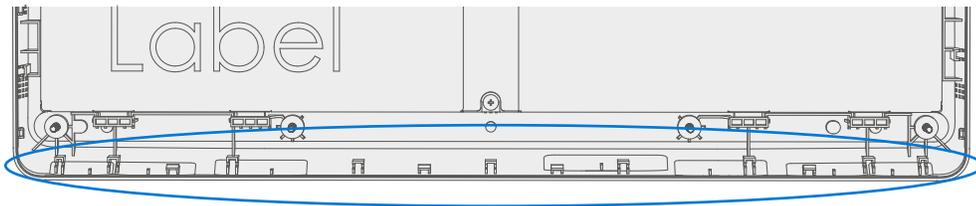


## Reinstall C-cover Keyboard Process

1. **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. Carefully inspect the battery surface and area around battery specifically for any foreign objects before removing battery cover.
  - b. Check and remove any foreign objects that the magnets may have attracted or that may have been accidentally introduced into the device while open.

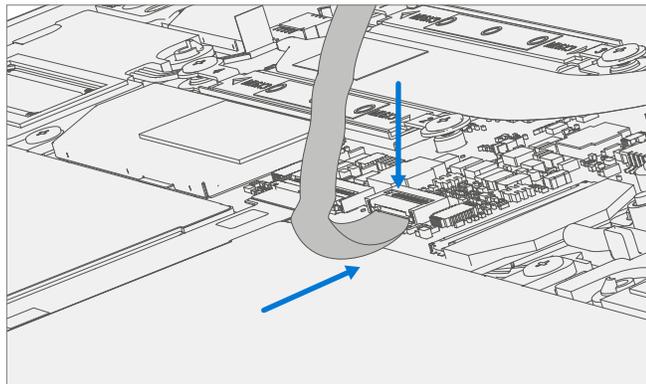


D-bucket



C-cover

2. **Connect C-cover FPC** – Remove battery cover. Hover the C-cover over the device while assembling the C-cover FPC to the main board. Slide the FPC into the connector and then press down on the locking tab.

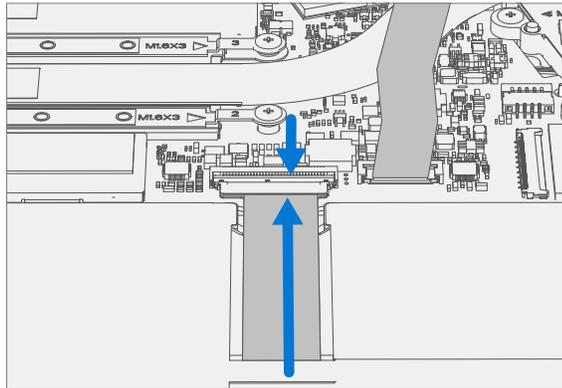


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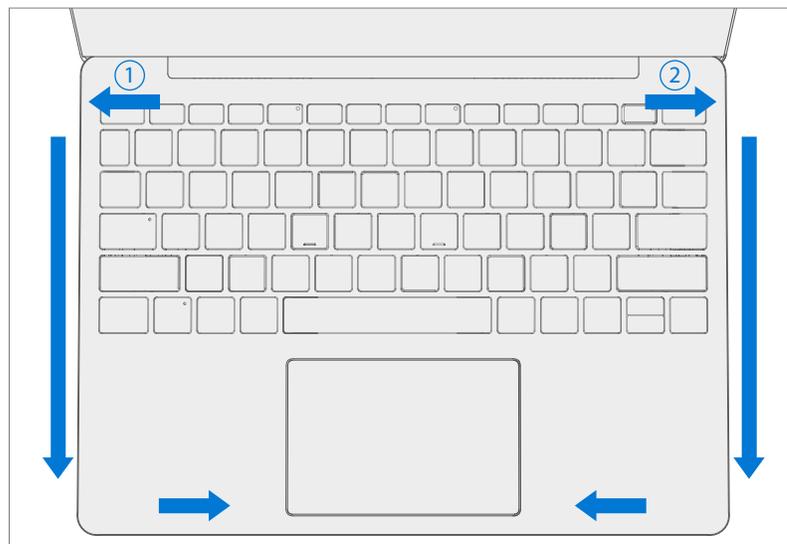
! **CAUTION:** Be sure that FPC bends fall in place properly as pre-bent and no folds or creases are created during re-assembly of C-cover.

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3. **Connect Battery FPC** – Connect the Battery FPC to the main board. Slide the FPC into the connector and then press down on the locking tab.



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 D-bucket and shift the C-cover snaps into place. Press gently on the C-cover to engage the snaps correctly. Follow the direction of progress as shown in the picture below. Verify there are no visible gaps between the C-cover and D-bucket.



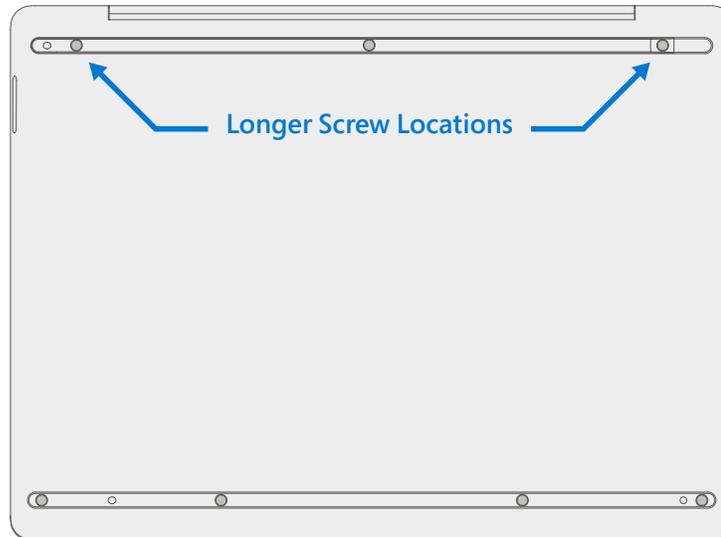
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! **CAUTION:** Ensure that the C-cover is correctly aligned and seated before closing the device. There is the risk of breaking the display if the device lid is closed before C-cover is aligned.

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5. **Install C-cover Screws** – Close the top cover and turn the unit over. Use a PH0 screwdriver to install the previously removed C-cover screws. Two of the seven screws are longer in length. Refer to the below photo for their location. All screws should be installed until just snug and seated, and then turned another 90 degrees (1/4 turn).



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! **CAUTION:** Ensure the longer screws are installed in the two corner locations under the rear foot pad.

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## Environmental Compliance Requirements

All waste electrical and electronic equipment (WEEE), waste electronic components, waste batteries, and electronic waste residuals must be managed according to applicable laws and regulations. and H09117, "Conformance Standards for Environmentally Sound Management of Waste Electrical and Electronic Equipment (WEEE)," which is available at this link: <https://www.microsoft.com/download/details.aspx?id=11691> In case of questions, please contact [AskECT@microsoft.com](mailto:AskECT@microsoft.com)

