HP EliteBook 840 G7 Repairability Assessment

An iFixit repairability assessment teardown of the EliteBook 840 G7.

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TOOLS:

- Spudger (1)
- Tweezers (1)
- Phillips #1 Screwdriver (1)
Step 1 — HP EliteBook 840 G7 Repairability Assessment

- Exterior reference photos

- The laptop isn't ingress-proofed, so many gaps in the keyboard and lower case—including ports, vents, speaker grilles, etc.—may allow water damage or particle buildup.
Step 2

- The lower case is held in place with five Phillips screws and some plastic clips.
- The screws are all captive, eliminating the chance of losing them.
- The clips are sturdy and require some force to disengage. They don't seem likely to break over the lifetime of the device.
- Nothing is left in the rear case, making for an easy and inexpensive replacement if it breaks.
- Almost everything in the computer itself is immediately accessible. A flat design makes for easy, independent replacement of interior components.
Step 3

- Several important components are available for removal as soon as the lower cover is removed.
- Pictured here: RAM, battery, SSD, fan, heat sink, wireless card, speakers, DC power input.
- The RAM, SSD, and wireless card are all industry-standard parts, allowing for easy consumer replacement or upgrading.
- All the above components including the battery are held in place with Phillips screws and/or clips. The fan and heat sink use captive screws.

These components (battery, storage, and RAM in particular) are some of the most likely to need replacing during the lifespan of a laptop. Their ease of access and replacement contribute heavily to the repairability of any device.
Step 4

- Once the battery is out of the way, the trackpad and its buttons are available for removal.

- Also underneath the battery is the CMOS battery, only lightly adhered in place.

- The USB A ports are on their own board under a metal bracket.

  Putting commonly-used ports on a separate circuit board makes for easy replacement if they ever wear out.
Step 5

- The motherboard is held down by four Phillips screws.

- Unlike the USB A ports, the two USB C ports and the HDMI port on the opposite end of the main board are soldered in place, meaning users will likely not be able to replace them on their own.

- Almost every connection port, screw socket, and cable on the motherboard is conveniently labeled.

Labels like these inspire confidence during any repair, reduce reassembly errors, and are a reassuring message from the manufacturer that this product was meant to be handled and repaired by humans.
Step 6

- Underneath the motherboard, a thermal sticker covers the keyboard which is riveted to the top cover, bundled as one assembly.

Info Keyboards are often the most-used component of any laptop, and are commonly the first victim of a liquid spill. While it's unfortunate that this one cannot be replaced independently, at least the other parts in the top case can be easily removed.
Step 7

The display is accessible as soon as the lower case is open.

The bezel is attached to the display with clips and adhesive. It is fairly easy to remove, though prying around the screen is unnerving.

It would be helpful if the clips and adhesive were weaker, or the bezel were more rigid. That way the bezel could be removed by pulling upward without bending the thin plastic, reducing the amount of prying required to remove it.
Step 8

- The display panel is adhered in place with two extremely forgiving stretch-release adhesive strips.
- The pull tabs are not very obvious and may potentially be overlooked, resulting in some dangerous prying. Thankfully they are noted in HP's documentation.
- The hinge cover clips to the bottom of the display assembly. The cover required significant force to remove.
  - Since the display and camera cables route through this cover where the hinge moves, they may experience stress from repeated flexing, eventually needing replacement.
- Once the display panel is removed, the microphone, ambient light sensor, and camera assembly are accessible.
Step 9

- Final layout shot
Step 10 — Final Thoughts

The HP EliteBook 840 G7 earns a 9 out of 10 on our repairability scale (10 is the easiest to repair):

- The RAM, SSD, battery, and display are easily accessible and removable.
- Almost all moving parts, including the speakers, trackpad, and fan are modular and can be independently replaced.
- All screws are Phillips, and many are identical, preventing damage from accidental misplacement.
- Many parts and cables are labeled.
- Manufacturer provides free user-accessible repair documentation.
- The keyboard, a common point of failure, is not independently replaceable.
- Some ports are soldered to the main board.