



RGE Case Analysis: Let's Solve This Together!

Case #: 002

Title: *The Case of the Bashful Battery*

This Galaxy Book wasn't being repaired just to save an old laptop. It had a next assignment.

RGE planned to donate it through Big Brothers Big Sisters for a deserving young person who could benefit from having a capable personal computer of their own.

And this was not an obsolete machine being passed along simply because it was still turned on. The Galaxy Book remained an excellent production PC when plugged in — capable of schoolwork, documents, research, video, productivity, and the full experience of learning to use a real personal computer.

The Problem

The original battery was about four years old and had reached the end of its useful life. The laptop itself, however, was still performing very well. Rather than retiring an otherwise excellent computer, we replaced the aging battery and began testing.

Replacement Battery #1

The first new replacement battery was installed and charged normally. That was encouraging. But once the Galaxy Book was unplugged, the battery discharged far too quickly — essentially running down in about 40 to 45 minutes.

That was nowhere near the portable runtime we hoped to restore, so before accepting the result we tried a second new replacement battery.

Replacement Battery #2

Battery #2 presented almost the opposite problem. It behaved well during discharge testing, but it would not recharge properly. A battery that cannot reliably accept a charge is no solution, no matter how well it behaves while unplugged. That gave us a useful comparison. Battery #1 would charge reliably but had very limited unplugged runtime.



RGE Case Analysis: Let's Solve This Together!

Case #: 002

Title: *The Case of the Bashful Battery*

Battery #2 offered better discharge behavior but could not be depended upon to recharge.

The Best Practical Choice

We therefore removed Battery #2 and reinstalled replacement Battery #1. It was not a perfect battery solution, but it was the better and more predictable choice for the way this Galaxy Book will now be used.

Plugged into AC power, the Galaxy Book remains an excellent, stable production computer. Battery #1 also provides a short, unplugged window — useful for moving the laptop from one location to another or for brief use away from an outlet.

RGE Recommendation

Keep the Galaxy Book primarily plugged in. When unplugged operation is needed, limit it to approximately 30 minutes and then reconnect the charger. That conservative window provides a practical margin within the roughly 40-to-45-minute runtime observed with replacement Battery #1.

The RGE Takeaway

Sometimes the best repair is not the one that makes an older computer perfect again. It is the one that preserves what the computer still does very well and establishes sensible limits around what it no longer does well.

This Galaxy Book still has plenty to offer. Paired, as planned, with a new 24-inch monitor and wireless keyboard/mouse, it becomes a primarily AC-powered workstation for schoolwork, learning, creativity, and everyday computing — with limited unplugged capability when needed.

Plugged in: Champ. 🏆

Unplugged: 30-minute leash. 🔌 😊