MacBook Air 11" Early 2015 Teardown
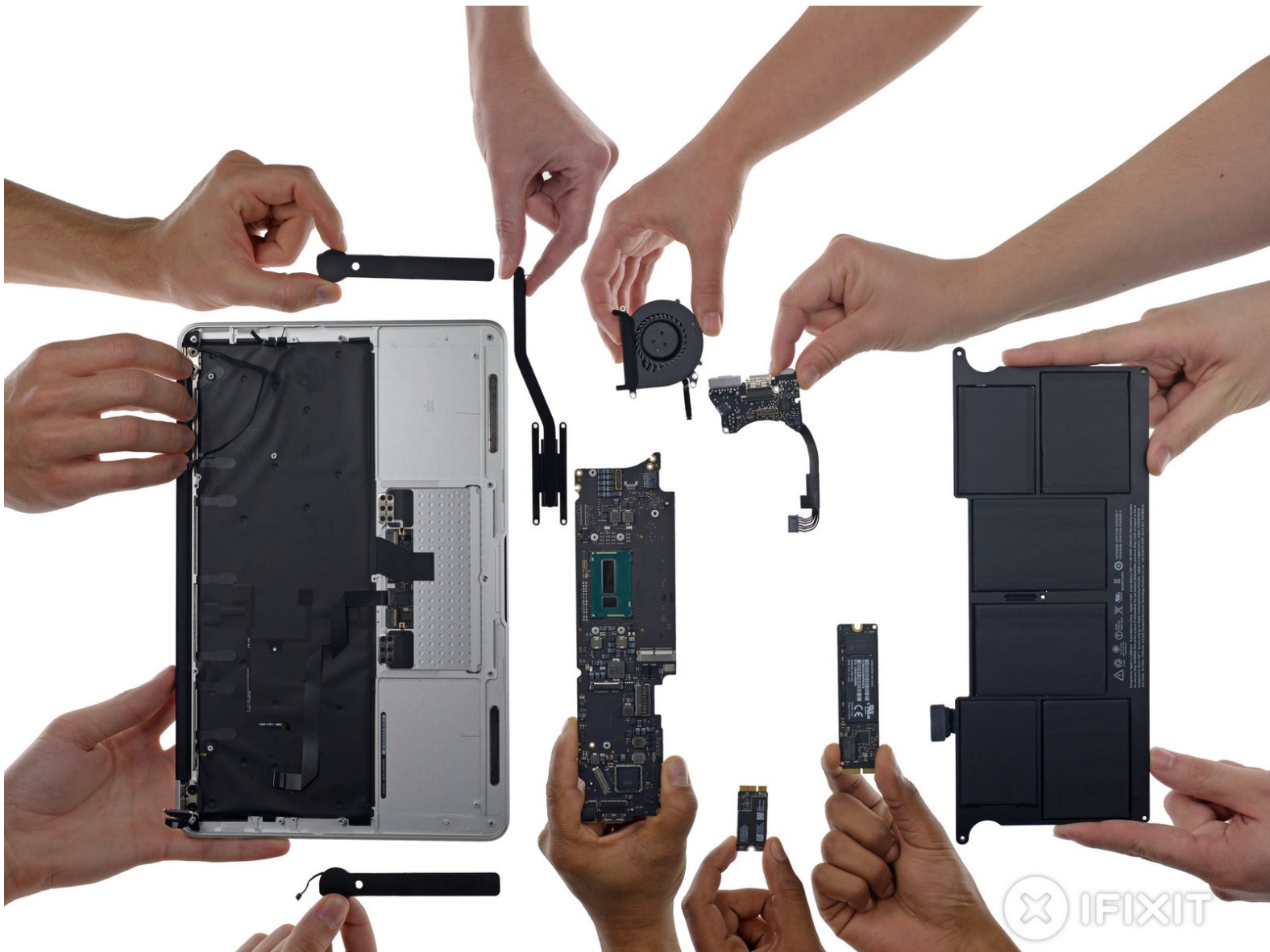
Teardown of the MacBook Air 11" Early 2015 on March 10, 2015.

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INTRODUCTION

Tick, tock—that's the sound of Intel punching out another line of processors, the newly minted Broadwell series. They splashed down into Apple's MacBook Air lineup just yesterday, and we wasted no time in picking them apart. **With the 13" model duly dispatched**, we turn our attention to its 11" counterpart. Join us in tearing down the Early 2015 MacBook Air 11".

Breathe that heady teardown air—follow us on Instagram, Twitter, and Facebook!

🔧 TOOLS:

- P5 Pentalobe Screwdriver Retina MacBook Pro and Air (1)
- T5 Torx Screwdriver (1)
- T8 Torx Screwdriver (1)
- Spudger (1)

## Step 1 — MacBook Air 11" Early 2015 Teardown
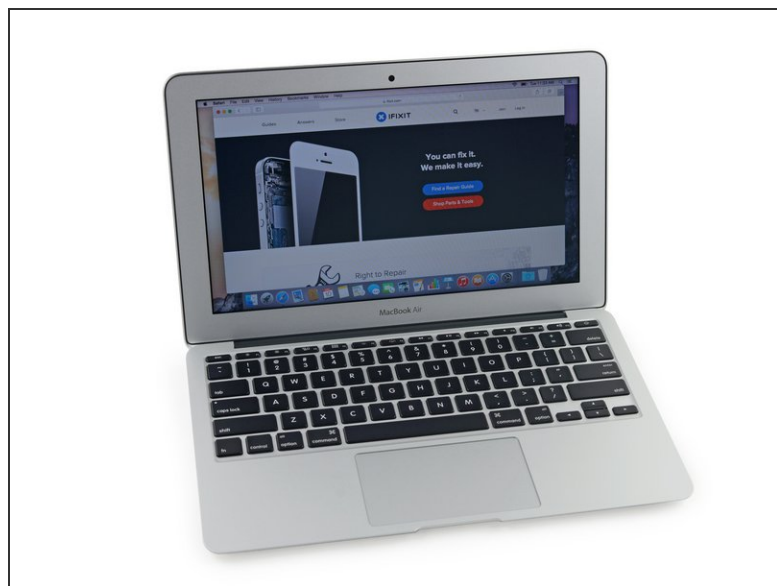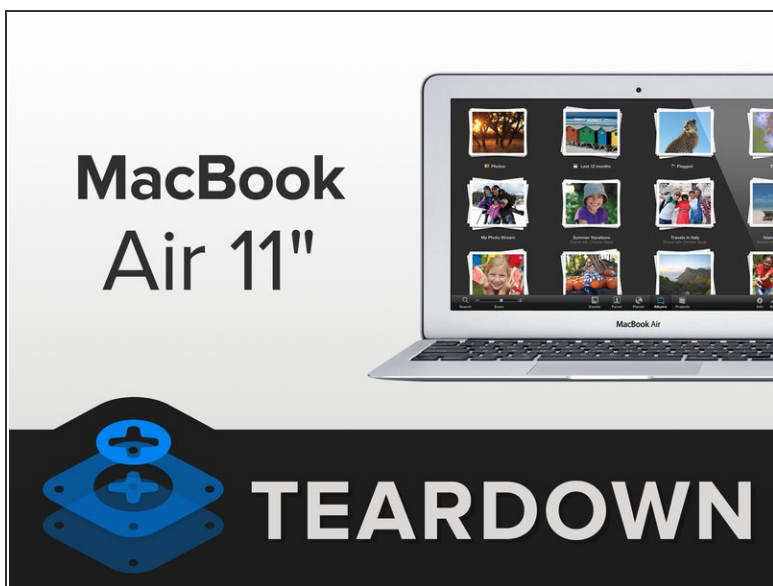
- What to expect from the Early 2015 MacBook Air 11"? We gave it a good looking over, but durned if we could tell it apart from the previous generation. Here's what the box says:

  - 5th generation, dual-core Intel Core i5 processor with Intel HD Graphics 6000

  - 128 GB flash storage (configurable to 512 GB)

  - 4 GB LPDDR3 RAM, configurable (but **not** upgradable) to 8 GB

  - 11.6" 1366x768 pixel display (~135 ppi)

  - 802.11ac Wi-Fi connectivity

  - Thunderbolt 2

  - Dual microphones

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Step 2

- Before we dispatch the back case, we take a quick peek at the model number, A1465—the same digits we found on models dating as far back as mid 2012.

- We've got a few loose screws—and we're proud of it!

  - We are proud that we're not getting screwed by any fastener, least of all Apple's proprietary pundit of prostration, the perfidious Pentalobe.

Step 3
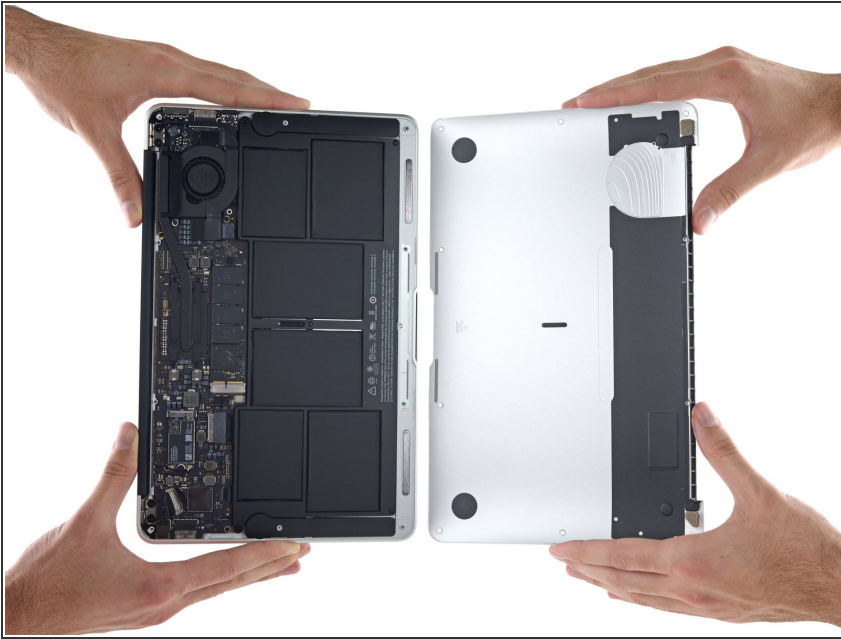
- Our first look under the hood reveals exactly what we expected. [Four hands](). Or rather, no change from [last year]().

- This [sequel is making us feel a little stuck in a time warp](), so we quickly skip forward in hopes that Apple didn't repeat the mistakes of the past.

Step 4
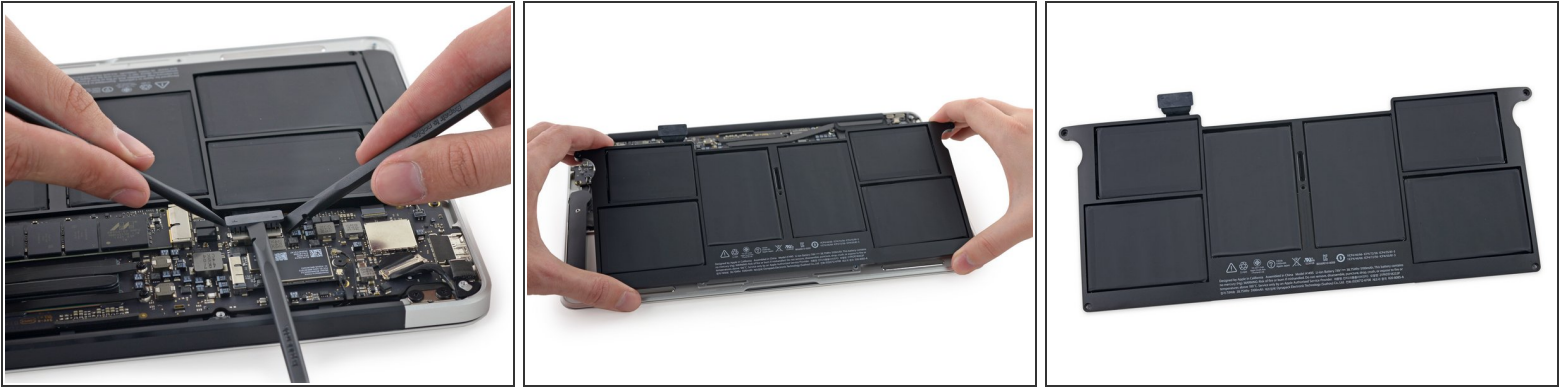
⚠️ All hands on deck! Spudgers at the ready! Disconnect battery!

ⓘ That was easy. Removal was easy too, thanks to screws and no adhesive to get in the way of battery freedom. Let's see what this pack is packing:

- While the 7.6 V, 5100 mAh (38.75 Whr) battery matches last year's model spec for spec, Apple alleges an extra hour of life while watching iTunes movies (up to 10).

    - ⓘ This is most likely attributable to improvements in the new Broadwell CPU.

- Microsoft promises a similar "9 hours of web browsing" from its MacBook Air killer, the Surface Pro 3. The Surface has a slightly larger 7.6 V, 5380 mAh (42.4 Whr) battery.

Step 5
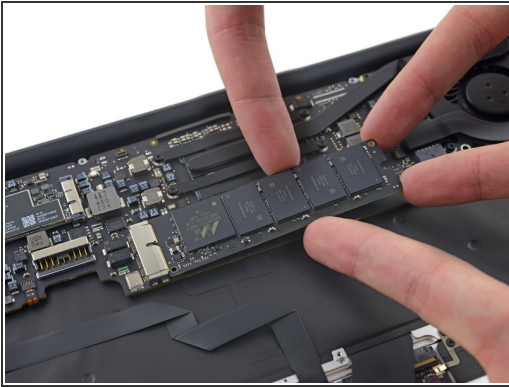
- While the bigger, badder, 13-incher Air got a faster and flashier SSD, the 11" model is stuck in 2013 with the same old, same old.

  - (i) Apple decides not to spread the upgrade fun; we get stuck with a geriatric, 2-year-old SSD. Bring on the extra help to get it up and out of bed.

- With a little poking and prodding, it proceeds to spill the beans—er, chips. In fact, they're very much the same chips we dipped into on the mid-2013 version:

  - 8 x SanDisk 05131 016G 16 GB NAND flash memory (128 GB total)

  - Marvell 88SS9183 PCIe SSD controller

  - Samsung K4B2G1646E 2 Gb (256 MB) DDR3 SDRAM

Step 6
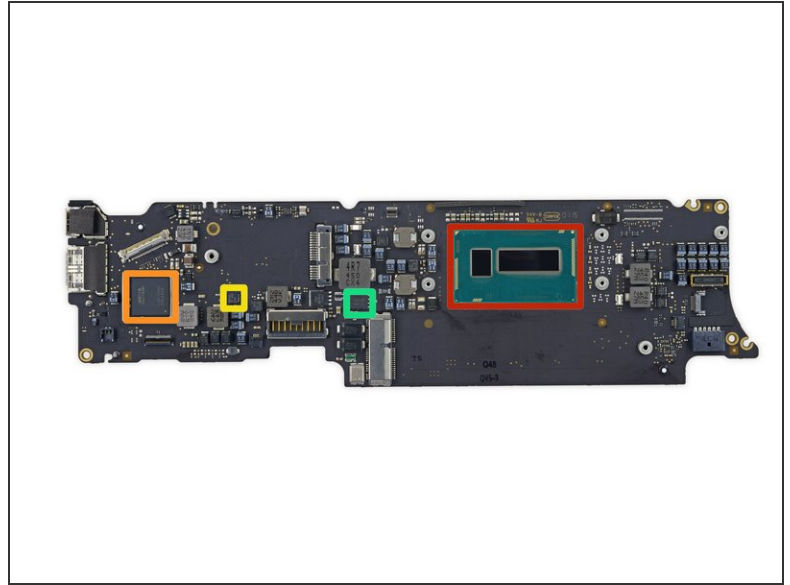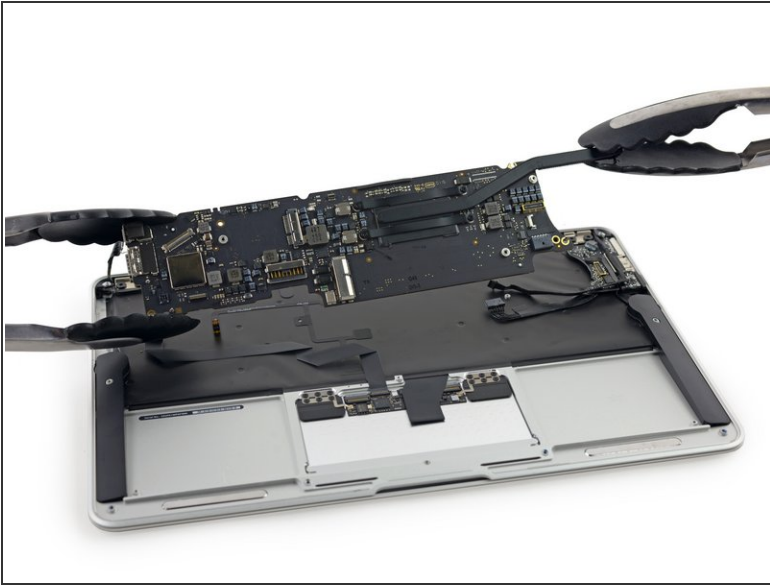
- Greedy for more chips, we decide to give the logic board the clamps. What's our reward? Let's take a look-see:

  - 1.6 GHz Intel Core i5 5250U processor, with integrated Intel HD Graphics 6000

  - Intel DSL5520 Thunderbolt 2 controller

  - Texas Instruments 58873D synchronous buck NexFET power block MOSFET pair

  - ON Semiconductor 4902F RBV1L dual N-channel power MOSFET

- ⓘ Although Broadwell is mainly a 14 nm die shrink of the existing Haswell microarchitecture, it is up to 30% more power efficient.

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Step 7
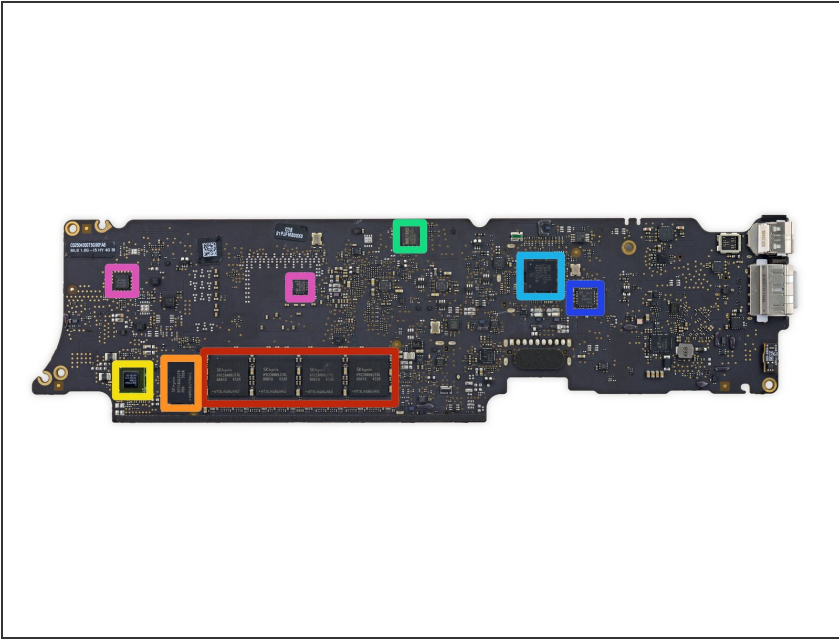
- Even more chips reveal themselves on the back:

  - SK Hynix H9CCNNN8JTALAR LPDDR3 SDRAM 4 x 1 GB for 4 GB total

  - SK Hynix H5TC4G63CFR 4 Gb (512 MB) low power synchronous DRAM

  - Broadcom BCM15700A2, appears to be a wireless networking chipset

  - Macronix MX25L6473E serial multi I/O 64 Mb flash memory

  - Texas Instruments/Stellaris LM4FS1EH SMC controller

  - Texas Instruments TPS51980A synchronous buck controller

  - Intersil 958 26AHRZ N450MT and SMSC EMC1704-2 Current/DC Power Sensor with Temperature Monitoring

Step 8
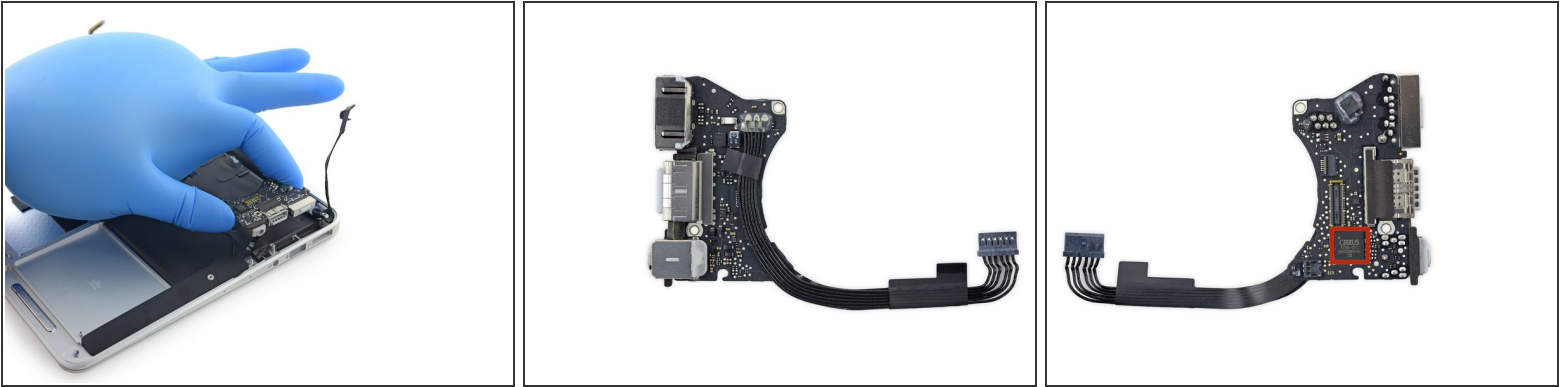
- We are airing the differences in these lightweight notebooks, and the last thing to come to the table is the I/O board.

- With a *light touch,* we remove the I/O board for a better look at the headphone jack, a USB port, and the MagSafe 2 port.

- A passing glance at the board reveals the same Cirrus Logic 4208-CRZ HD audio codec found in this year's 13" model (likely similar to the 4207).

Step 9

- MacBook Air 11" Early 2015 Repairability Score: **4 out of 10** (10 is easiest to repair).

  - Once you get past the outer case, all the major components are fairly easy to access for replacement.

  - The outer case is held on with Apple's proprietary Pentalobe screws, so you'll need the right screwdriver to get inside.

  - Just like the screws, all the components—including the RAM and SSD—are proprietary, making replacement parts more difficult to source.

  - Worst of all, this MacBook Air is not upgradeable after purchase. Like many generations of the Air, the RAM is soldered to the logic board, and SSDs are not compatible between generations.

To reassemble your device, follow these instructions in reverse order.