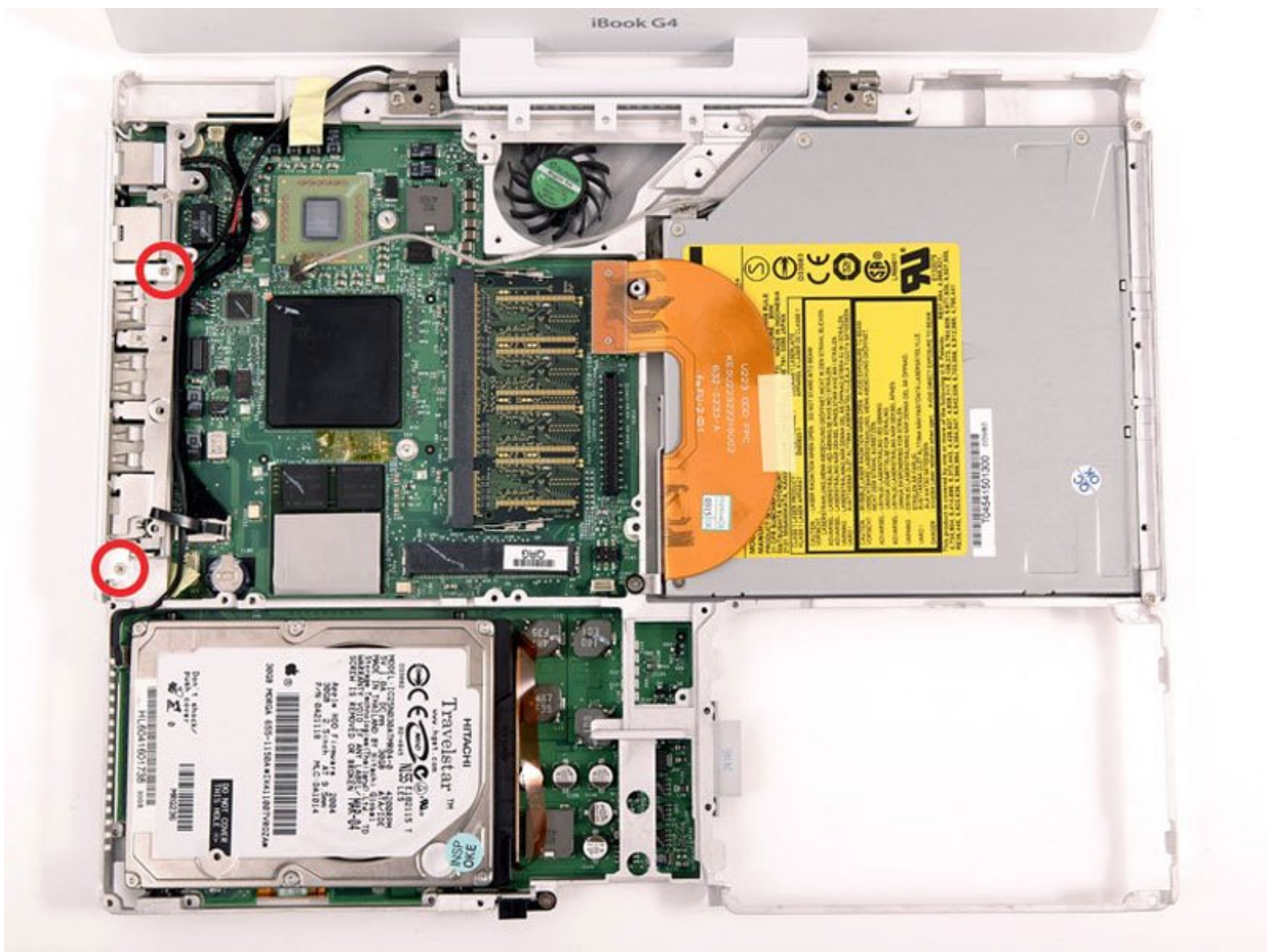# iBook G4 12" 800 MHz-1.2 GHz Logic Board Replacement

Written By: iRobot

INTRODUCTION

The motherboard includes all ports except the DC-In board.

TOOLS:

- 4mm Nut Driver (1)
- Anti-Static Wrist Strap (1)
- Coin (1)
- Phillips #00 Screwdriver (1)
- Flathead 3/32" or 2.5 mm Screwdriver (1)
- Spudger (1)
- T8 Torx Screwdriver (1)

PARTS:

- iBook G4 12" 1 GHz Logic Board (1)
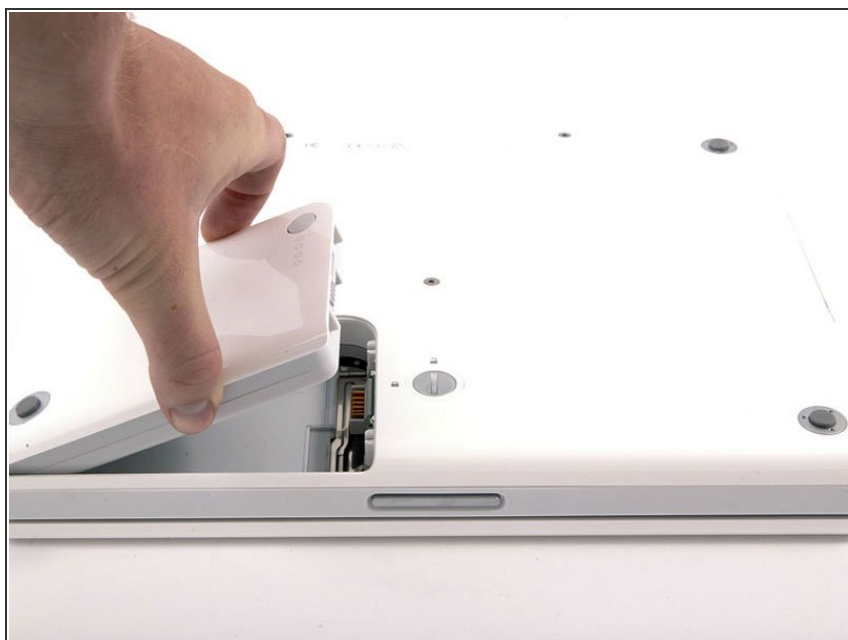- iBook G4 12" 800 MHz Logic Board (1)

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Step 1 — Battery

- Use a coin to rotate the battery locking screw 90 degrees clockwise.

Step 2

- Lift the battery out of the computer.

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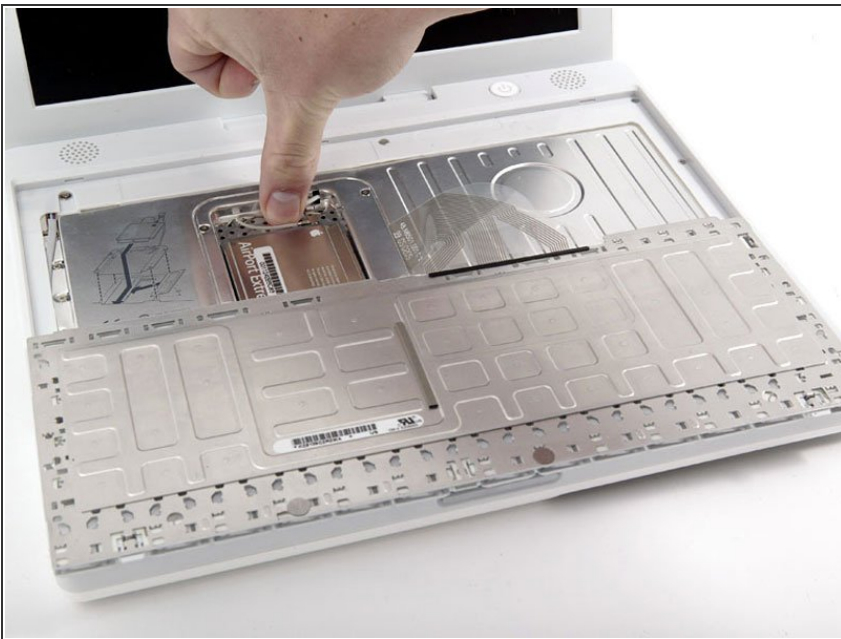
Step 3 — Keyboard

- Pull the keyboard release tabs toward you and lift up on the keyboard until it pops free.

- ⓘ If the keyboard does not come free, use a small flathead screwdriver to turn the keyboard locking screw 180 degrees in either direction and try again.

- Flip the keyboard over, away from the screen, and rest it face-down on the trackpad area.

Step 4

- ⓘ If the computer has an AirPort card installed, follow the next three steps to remove it.

- Push the wire clasp away from the AirPort card and toward the display, then rotate up to free it from the RAM shield.

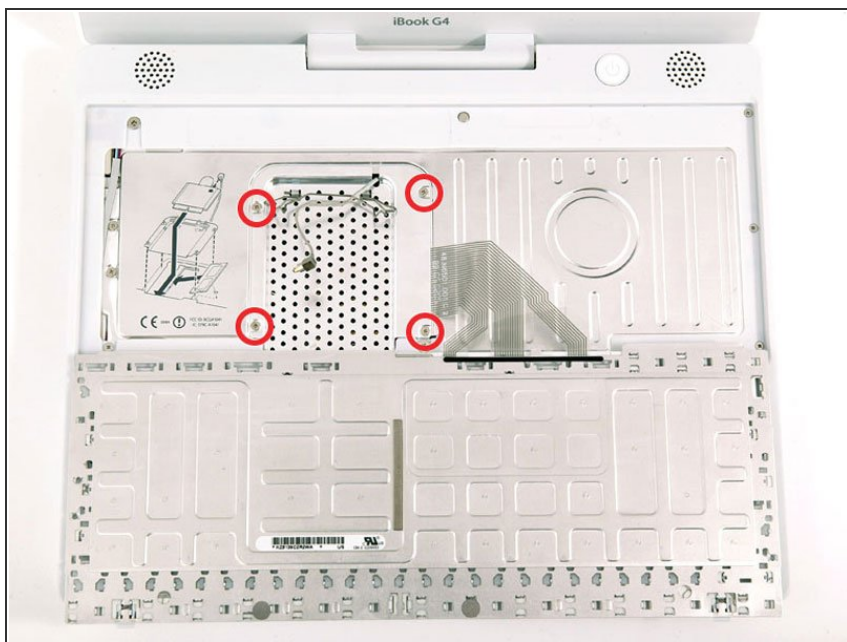This document was generated on 2020-11-27 08:02:35 PM (MST).

Step 5

- Grasp the clear plastic tab on the AirPort card and pull toward the display.
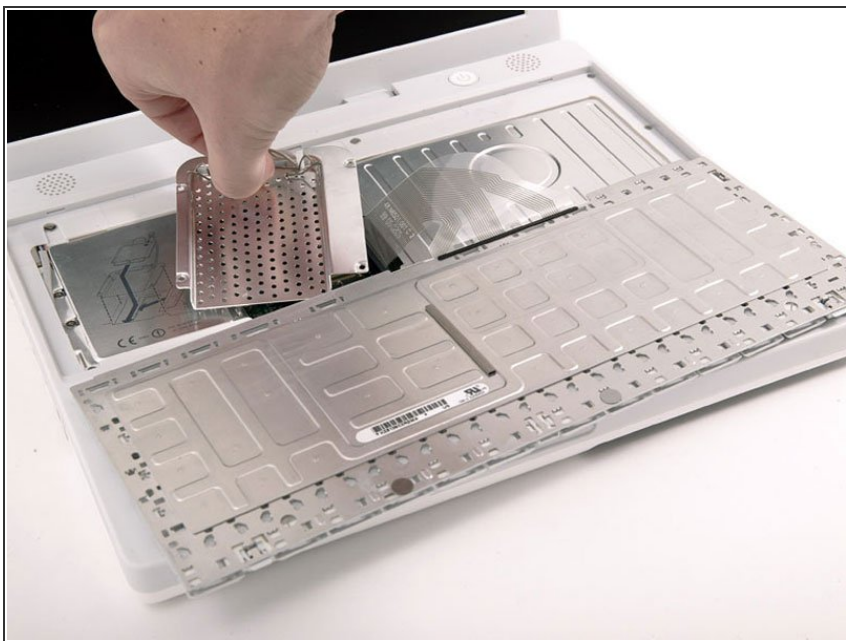
Step 6

- Hold the AirPort card in one hand and use your other hand to remove the antenna cable.
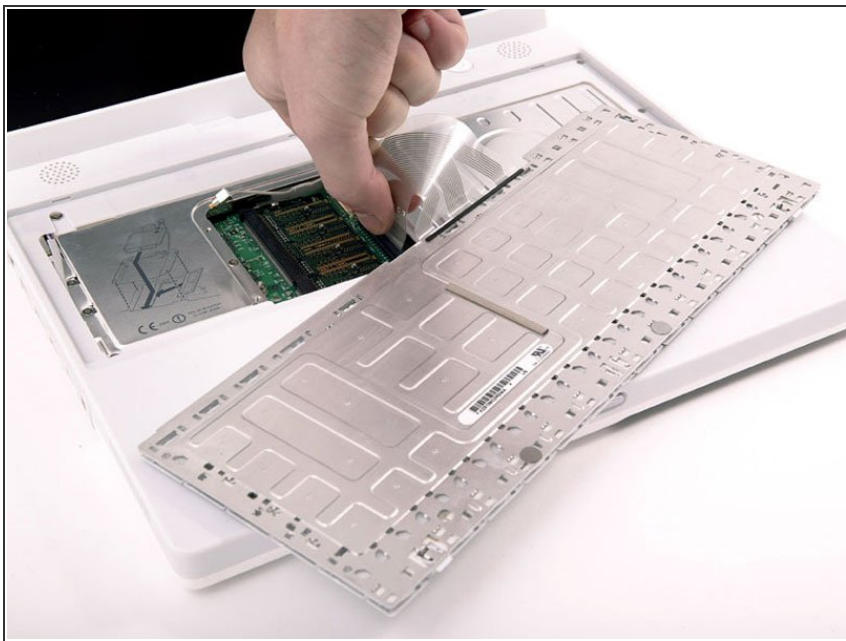
Step 7

- Remove the four silver Phillips screws that secure the RAM shield.

Step 8

- Grasp the metal bracket on top of the RAM shield and pull upward to remove the shield.

Step 9

- Pull the keyboard cable up from the logic board, holding the cable as close to the connector as possible.

- Make sure that you reconnect the keyboard cable before replacing the RAM shield.

Step 10 — Lower Case

- Use a pin (or anything you like) to remove the three rubber feet from the lower case.

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Step 11

- Remove the three newly-revealed Phillips screws.

Step 12

- Use a spudger or small flathead screwdriver to pry up the three metal rings that housed the rubber bumpers.
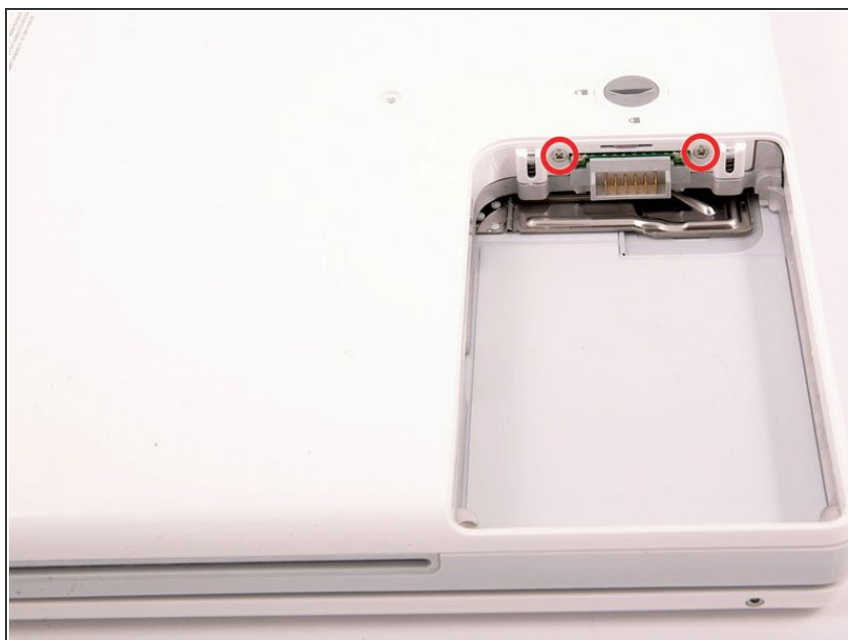
Step 13

- Remove the three Torx screws using a T8 Torx screwdriver.

- The shorter screw is in the center of the computer.

Step 14

- Remove the two Phillips screws on either side of the battery contacts.

Step 15

(i) Breathe deeply. Trying times are ahead, but we promise the lower case does come off.

● Push the thin rims of the lower case surrounding the battery compartment in, bending them past the tabs, and then lift up to free that corner of the lower case.

Step 16

● There is a slot on the wall of the battery compartment that locks the lower case in place. Use a small flathead screwdriver to pry out the slot's lower rim and pull up on the lower case to free the slot from the tabs holding it.

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Step 17

- Run a spudger along the seam between the lower case and upper case on the front of the computer to free the tabs locking the lower case. Pull up on the lower case and continue to use the spudger as necessary until you hear three distinct clicks.

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Step 18

● Continue to run the spudger around the front, right corner. There are two tabs on the port side of the computer, one near the front corner and one near the sound-out port.

Step 19
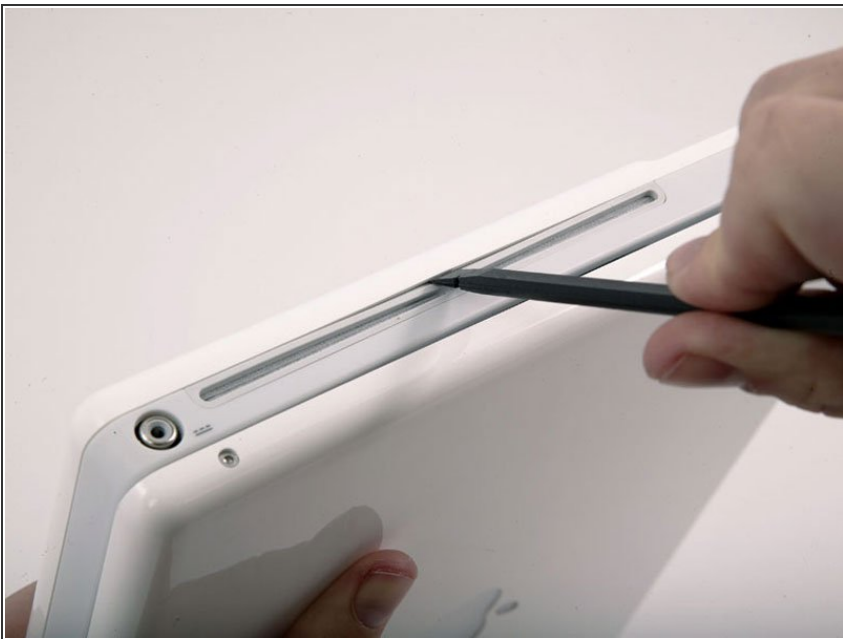
● There are three tabs over the optical drive that must be released before the lower case can come off. Slide the spudger into the lower case above the optical drive and run it toward the back of the computer until you hear three distinct clicks.

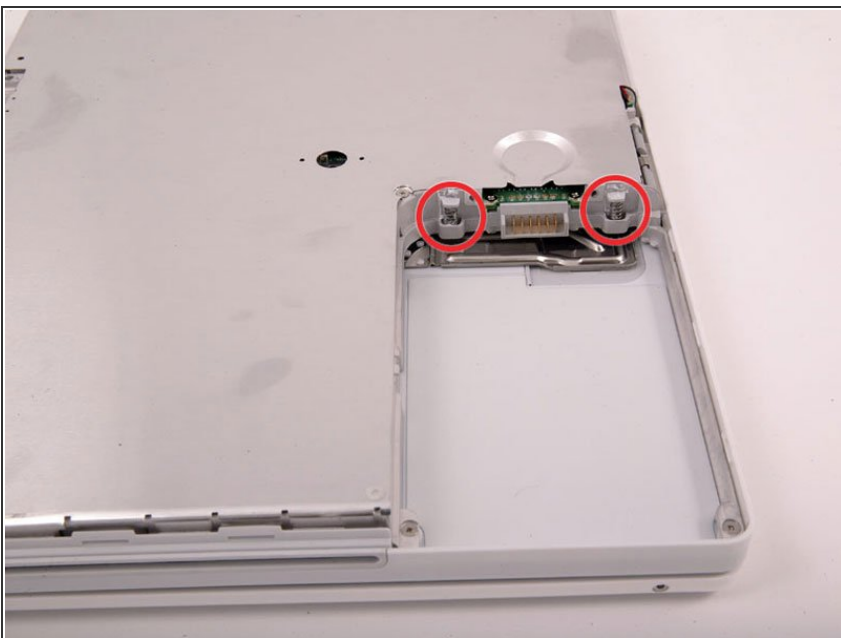This document was generated on 2020-11-27 08:02:35 PM (MST).

Step 20

- Once the front and sides of the lower case are free, turn the computer so that the back is facing you and pull the lower case up and away from you until the back tabs pop free.
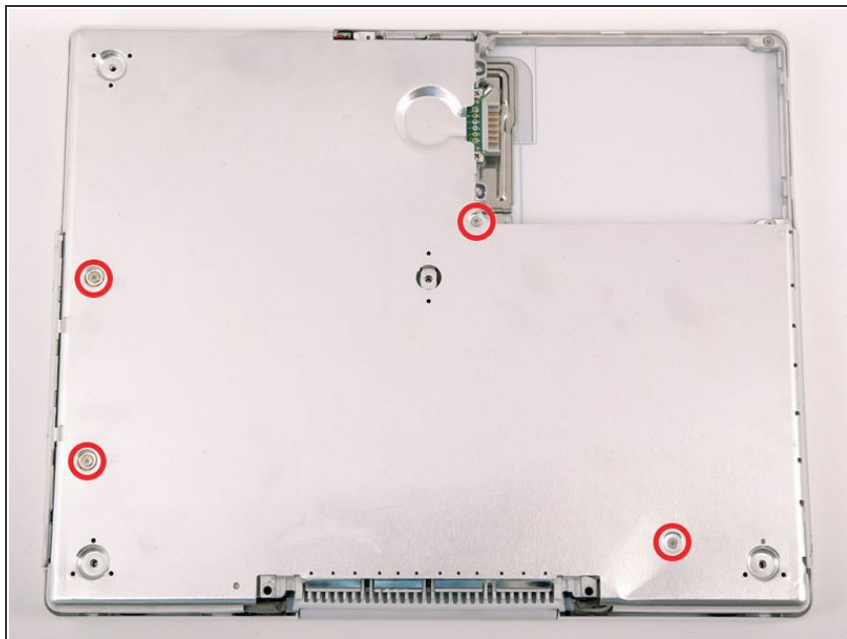
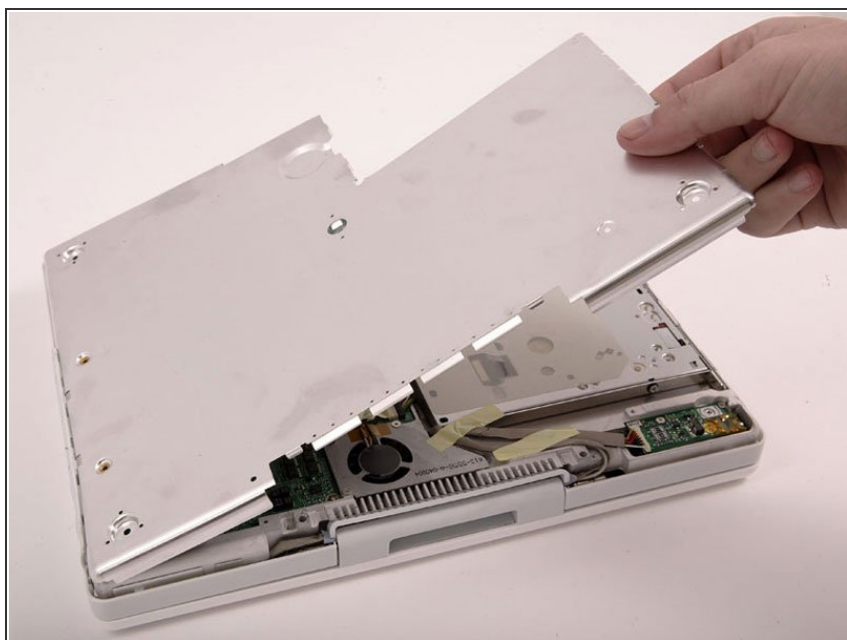- (i) it may be helpful to jiggle the case up and down.

Step 21

- Remove the small greasy springs with white plastic caps from either side of the battery contacts.

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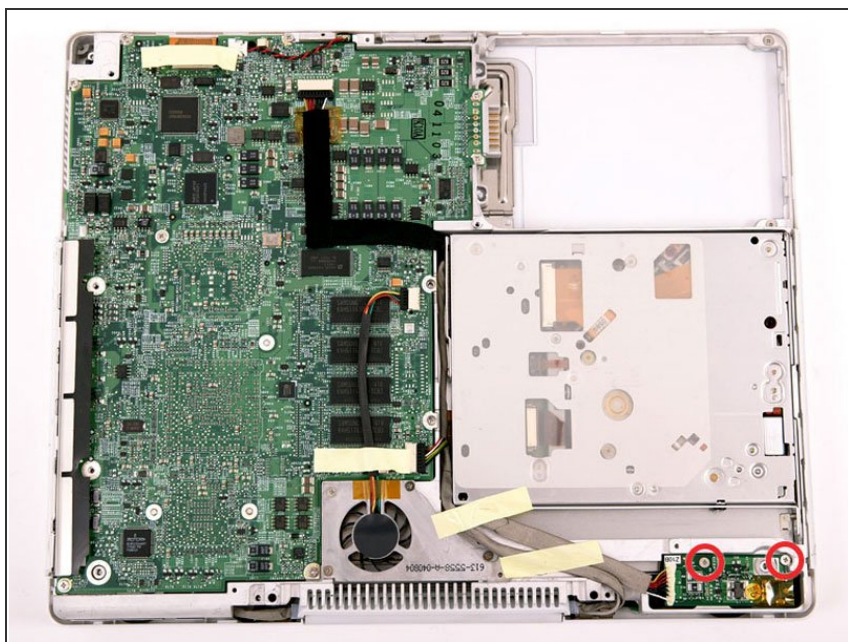
Step 22 — Bottom Shield

- Remove the 4 Phillips screws from the bottom shield.

- (i) The two longer screws are along the computer's edge, near the ports.
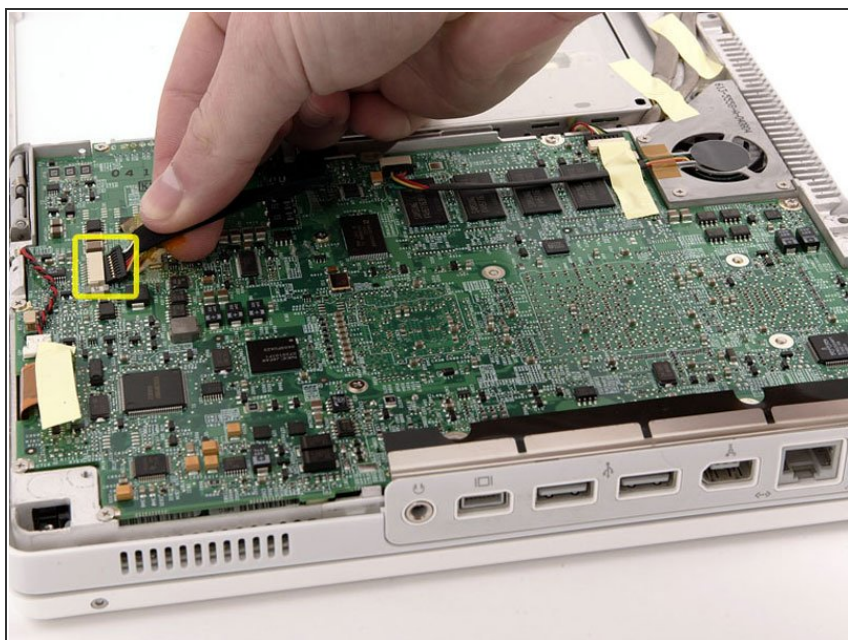
Step 23

- Lift the bottom shield off.

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Step 24 — DC-In Board

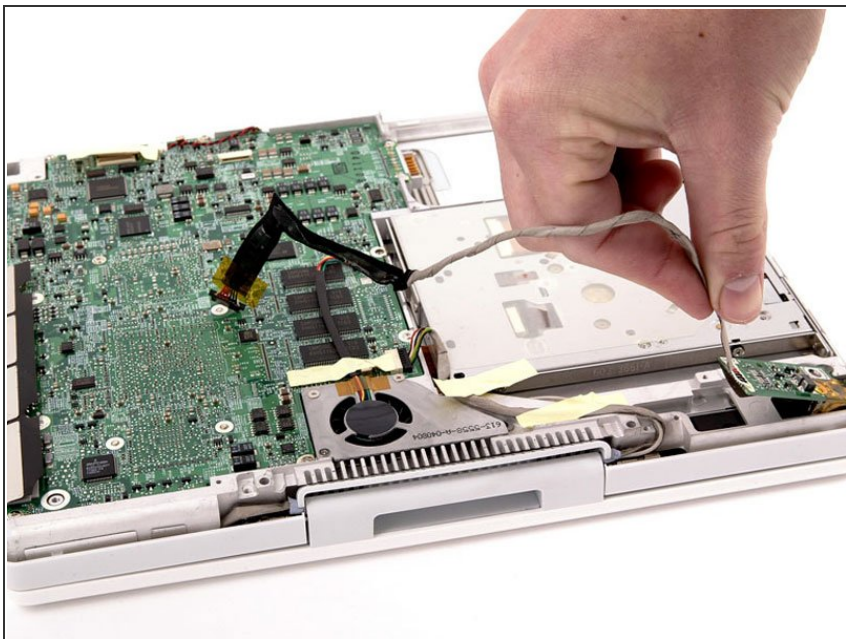- Remove the two Phillips screws securing the DC-In board.

Step 25

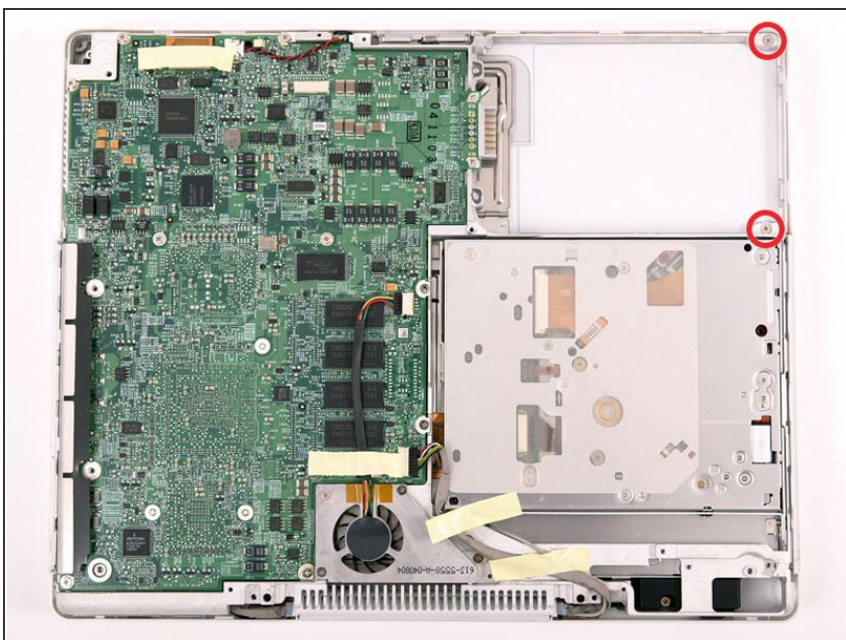- Disconnect the DC-In cable from the logic board.

|

Step 26

- Deroute the cable from around the optical drive, removing tape as necessary, and angle the DC-In board out of its compartment.

Step 27 — Upper Case

- Remove the two Phillips screws from the battery compartment.

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Step 28

- (i) We recommend placing the computer on a slab of grey anti-static packing foam from this point on to prevent damaging the logic board.

- Turn over the computer and open it.

- Pry up the magnet covering a Phillips screw near the middle of the computer.

Step 29
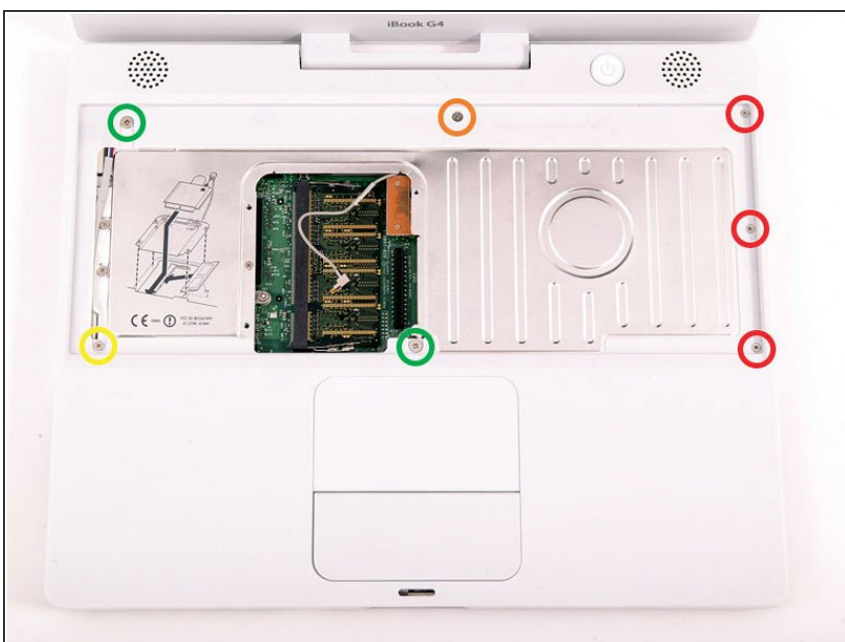
- Remove the following 7 screws from the edges of the keyboard area.

  - Three 2 mm Phillips along the right edge.

  - One 4.5 mm Phillips underneath where the magnet was.

  - One 6 mm Phillips with a small head in the lower left corner.

  - Two 6 mm Phillips with large heads, one in the upper left corner and one in the middle

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Step 30
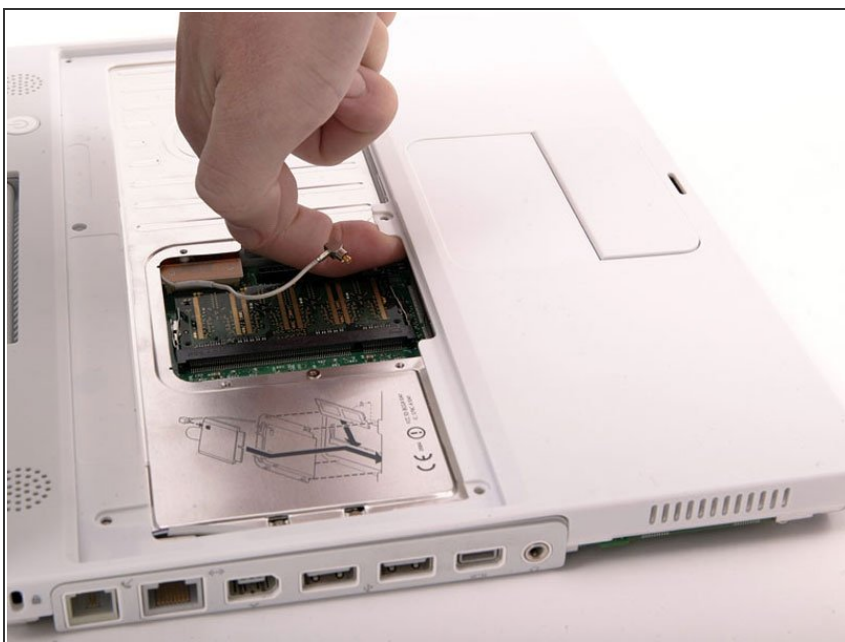
- (i) Before you can yank the upper case off, you must disconnect the trackpad connector, the blue and white power cable, and speaker cable as described in the next steps.

- Lift the upper case from the right side and use a spudger or your finger to disconnect the trackpad connector hidden beneath the white plastic tab. Due to model variatons your trackpad connector may be different from the one pictured.

Step 31

- Carefully lift the upper case about half of an inch and move it so that you can access the power and speaker cables.

- (i) If the upper case is sticking, it may be necessary to free the tabs holding the upper case to the metal framework along the outer edge of the battery compartment.

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Step 32

⚠️ The connectors at the ends of the cables are attached very firmly to the sockets on the logic board. Pulling directly on the cable will either separate the cable from its connector or the socket from the logic board.

● Lift the upper case enough to disconnect the blue and white power cable from the logic board. Using your fingernails or a dental pick, carefully pry the connector from its socket. Make sure you're pulling only on the connector and not on the socket.
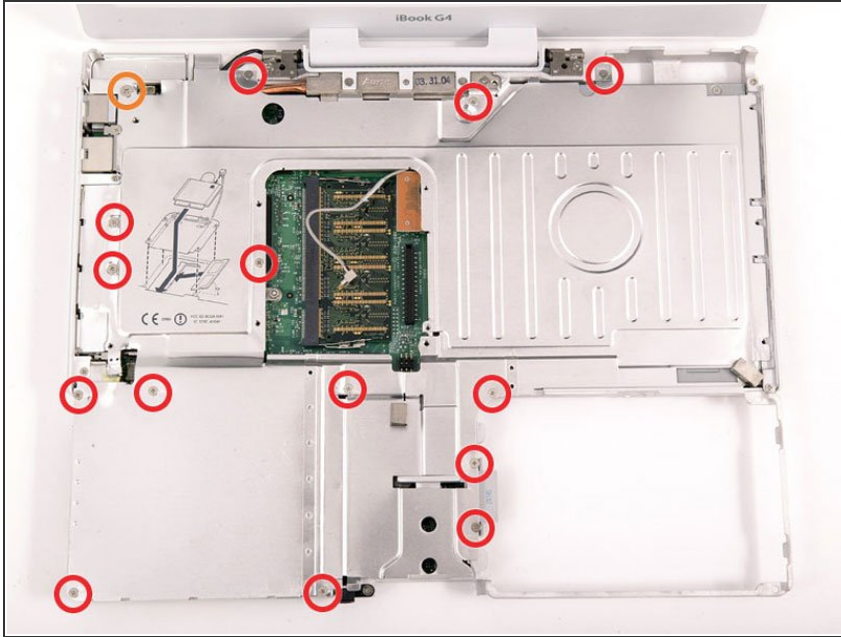
Step 33

● Lift the upper case off completely and disconnect the multicolored speaker cable from the logic board. As before, make sure you're pulling only on the connector and not on the socket.

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(i) Tip: the multi-coloured cable may be easier and less daunting to disconnect after removing the top heat shield. Prop the top case

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upright while removing the shield - the connector is then much more accessible.

Step 34 — Top Shield

- Remove the following 15 screws:
  - Fourteen 3 mm Phillips.
  - One 5.5 mm Phillips in the upper left corner.
- ⓘ Mind the magnet position in the lower right corner

Step 35

- Lift the top shield up from the right side, minding the upper left corner, which may catch on the metal framework.
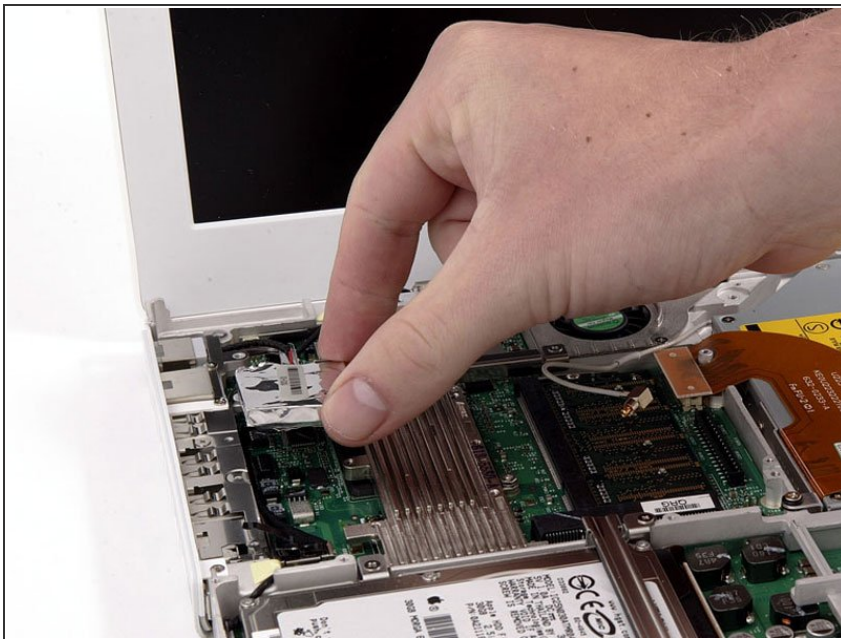
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Step 36 — Modem
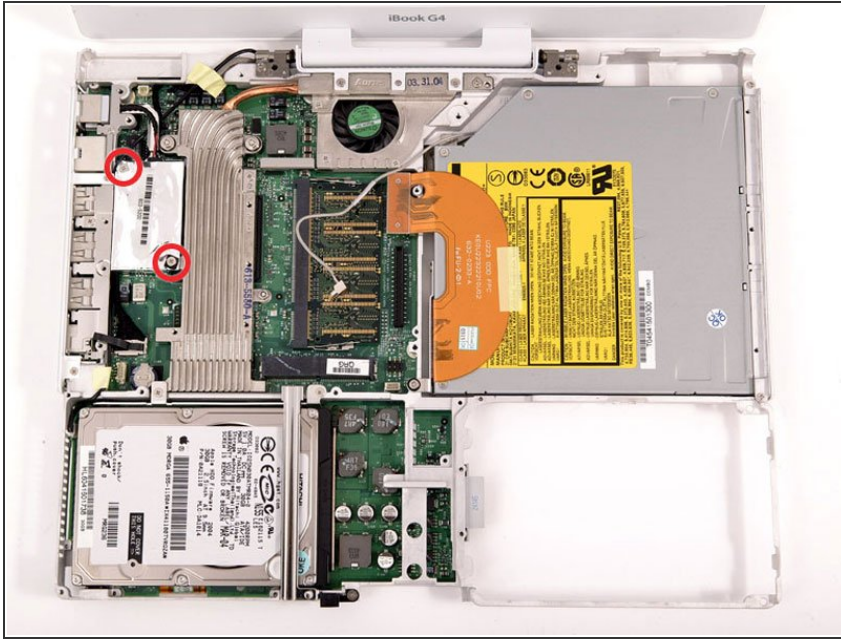
(i) Due to variations between iBook G4 models, your modem may look slightly different from the picture. All of the following steps apply to either model.
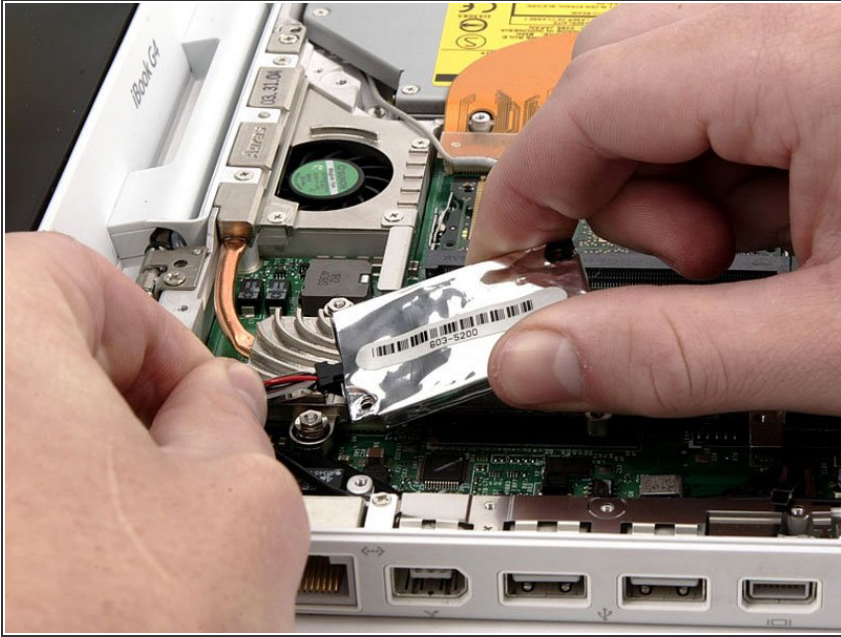
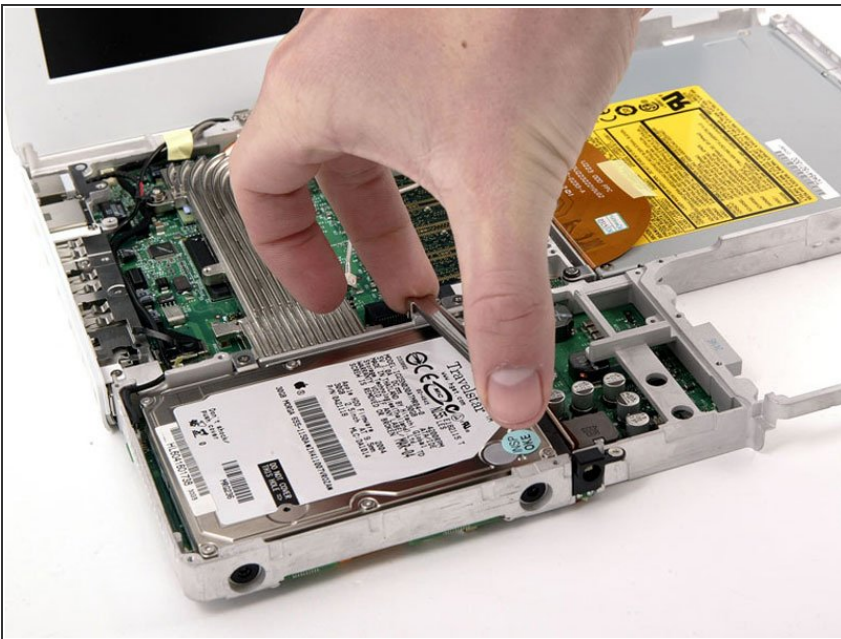● Remove the two Phillips screws at the corners of the modem.

Step 37

● Lift the modem and modem shield from the bottom.

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Step 38

- Disconnect the RJ-11 cable from the top of the modem.

- When replacing the modem, seat the shield first, and then connect the modem and press it firmly into the shield, making sure that it is connected to the logic board.
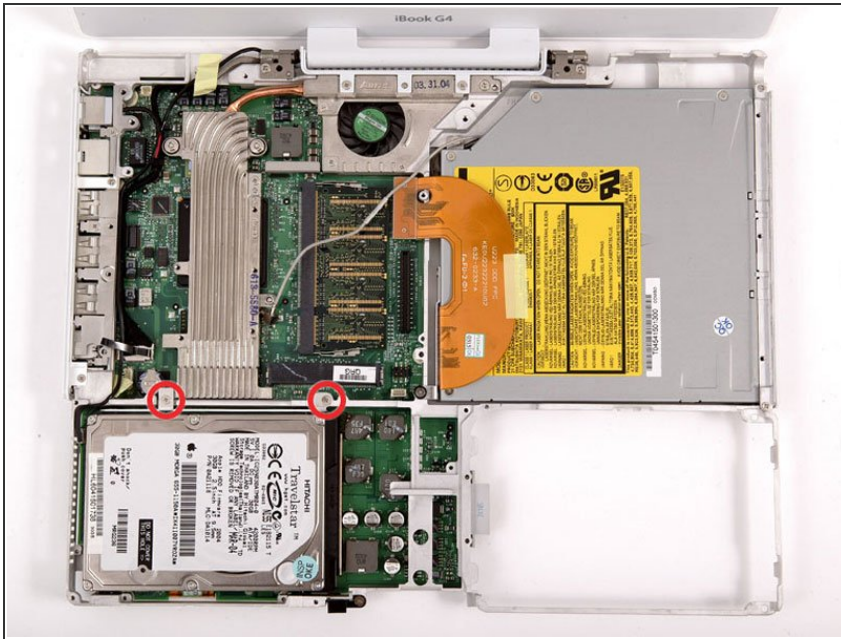
Step 39 — Heat Sink

- Lift the metal restraining bracket from the hard drive and place it aside.

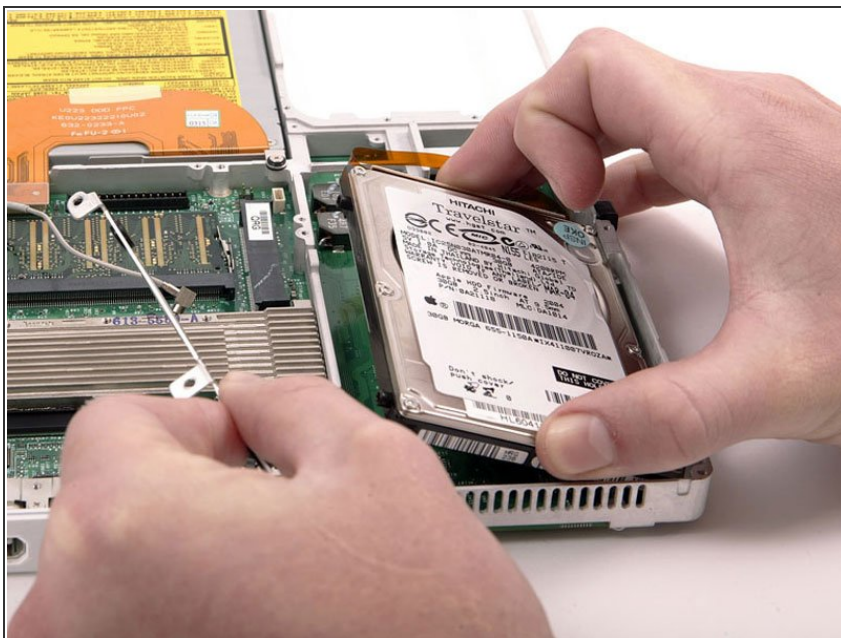This document was generated on 2020-11-27 08:02:35 PM (MST).

Step 40

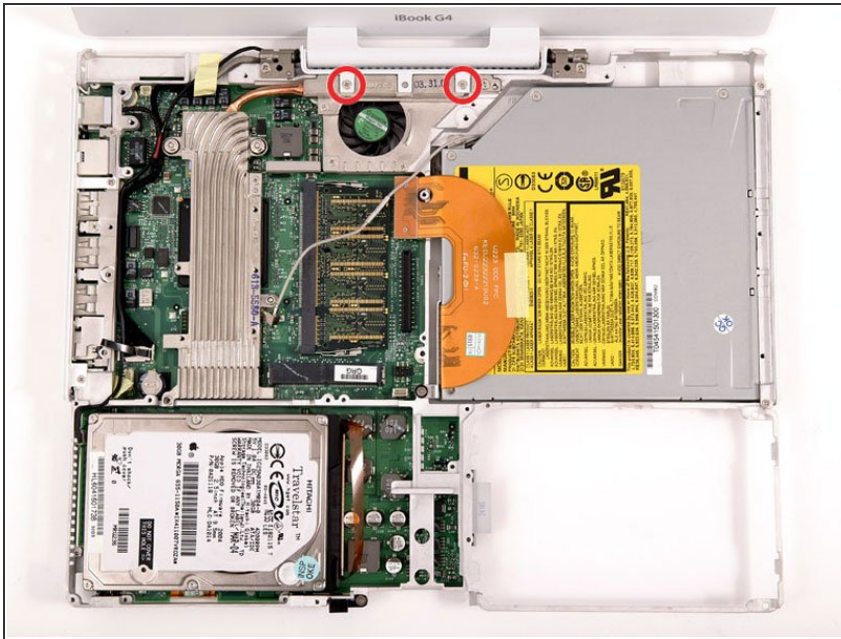- Remove the two Phillips screws securing the hard drive to the metal framework.

Step 41

- Lift the hard drive up and remove the metal bracket, then carefully lower the hard drive back into its compartment.
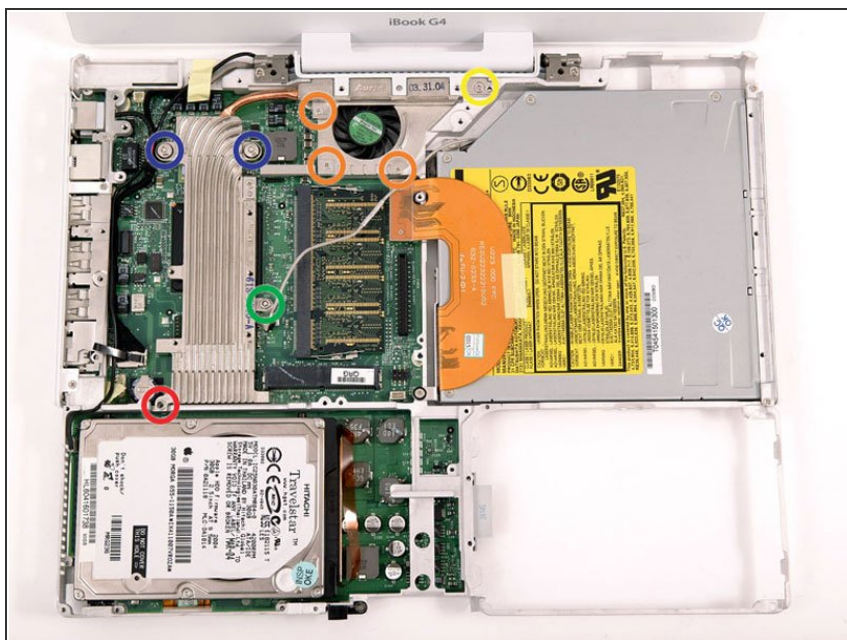
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Step 42

- Remove the two Phillips screws from the white plastic fingers of the hinge grill.

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Step 43

(i) The 3.5 mm Phillips screw indicated below with a red circle may be absent in some models.

- Remove the following 5 screws and 3 nuts from the heat sink:

  - One 3.5 mm Phillips from the lower left corner of the heat sink.

  - Three 6 mm Phillips from around the fan.

  - One 7.5 mm Phillips at the top right corner of the heat sink.

  - One 4 mm nut from the side of the heat sink.

  - Two 4 mm screw nuts with attached springs from either side of the heat sink.

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Step 44

- ⓘ It may be necessary to soften the thermal paste between the logic board and heat sink. You can soften the thermal compound using a hairdryer. Move the hairdryer back and forth over the ribbed metal section of the heat sink for one minute. At this point, the heat sink should come free easily.

- ● Use a spudger to pry the heat sink up on the left side, near the hard drive.

Step 45

- ● Grasp the heat sink in one hand and lift up the hinge grill in the other hand so that you can remove the heat sink from the computer.

- ⓘ If you need to mount the heat sink back into the laptop, we have a thermal paste guide that makes replacing the thermal compound easy.

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Step 46 — Logic Board
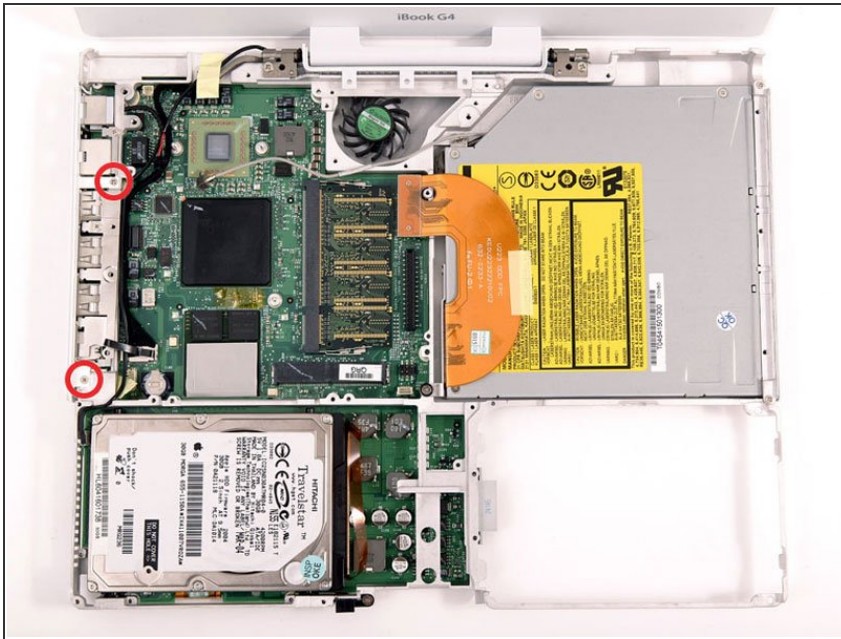
- Remove the two Phillips screws securing the white plastic fingers of the I/O bezel to the metal framework.

- The longer screw goes into the longer finger, closer to the display.

Step 47

- Lift up the left side of the computer and slide the I/O bezel away.
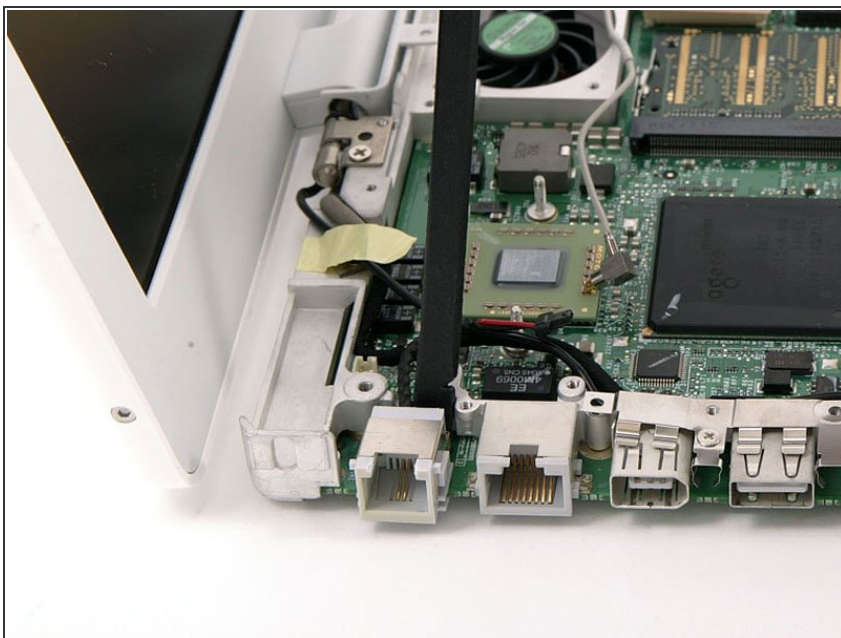
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Step 48

- Remove the single Phillips screw securing the EMI finger to the metal framework.

- 📌 The screw goes into the hole between the modem and ethernet ports.

- Lift the silver EMI finger off of the metal framework.

Step 49

- Wedge a spudger between the RJ-11 board and the metal framework and slide the RJ-11 board down and off of the logic board.
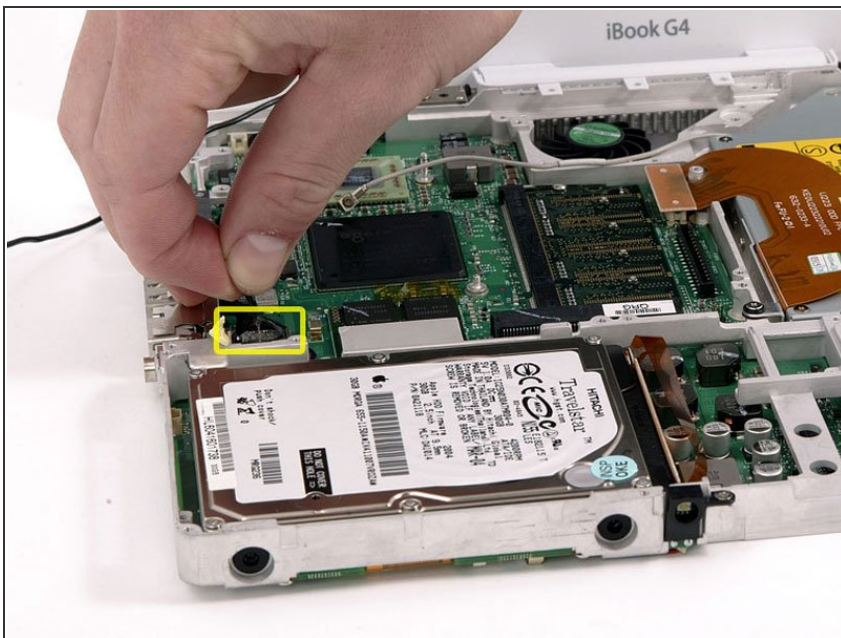
Step 50

⚠ The cable you're about to remove is very fragile - do not pull directly on the wires. Instead, try to pry up the connector directly, using a spudger or a small flathead screwdriver if necessary.
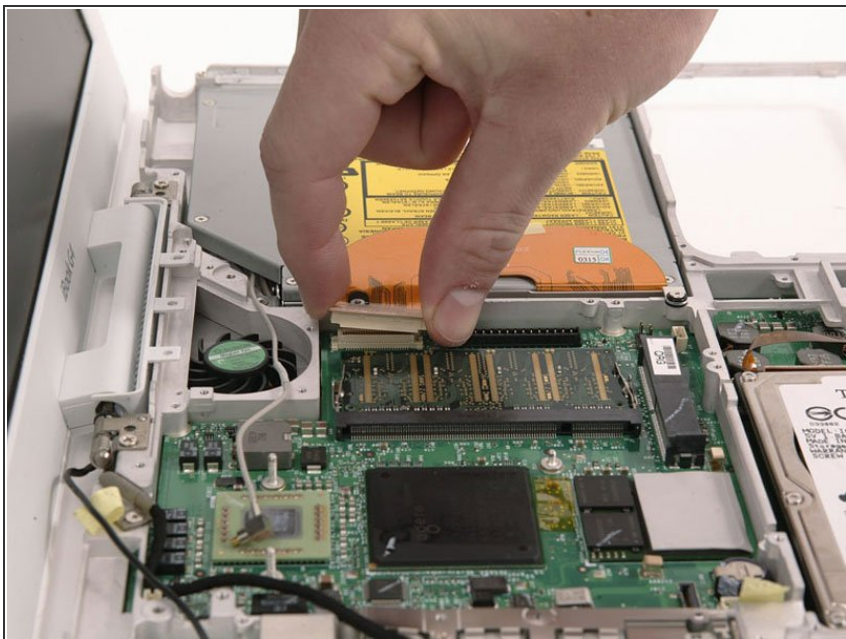
● Disconnect the microphone cable at the front of the computer, between the left side of the hard drive and the metal framework.

Step 51

● Use the black plastic handle to disconnect the display data cable from the logic board.

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Step 52

- There are two different styles of optical drive ribbon. If the cable extending from the optical drive is white, skip this step. If the cable is orange, then complete this step and skip the next two steps.

- Disconnect the orange optical drive ribbon from the logic board.
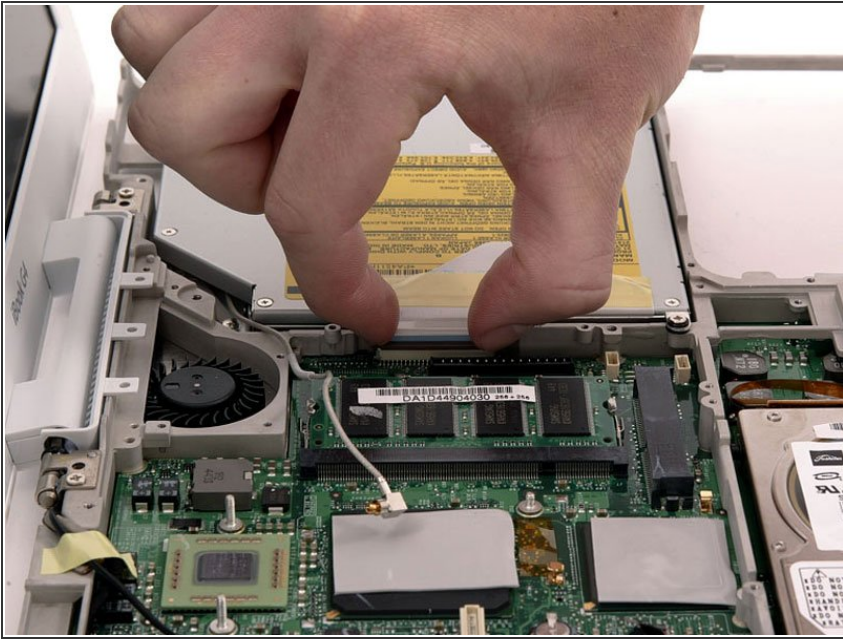
Step 53
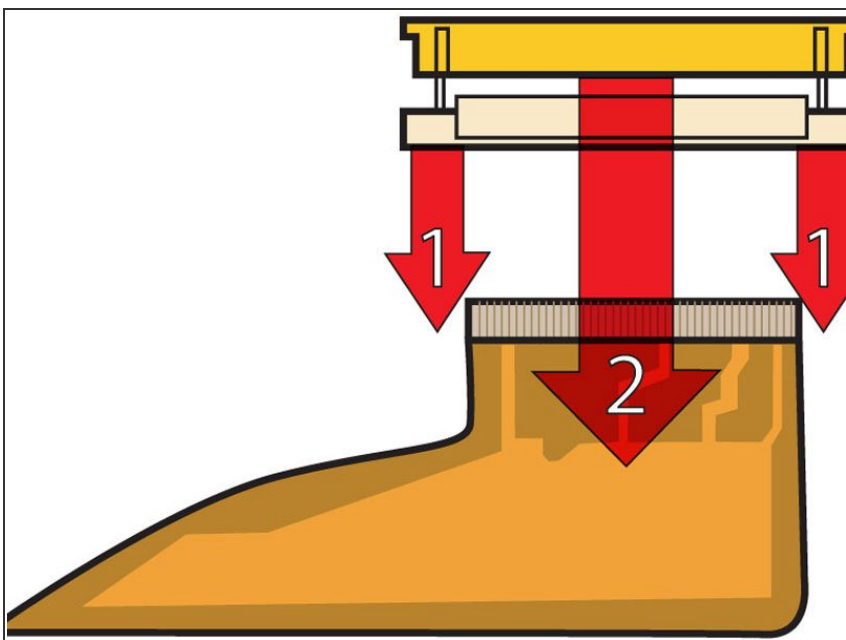
- This is a diagram of the ribbon clamp connector you will disconnect in the next step.

- 1) With your fingernails, grasp the locking bar on either side and pull up a small amount (about 1/16" or 2 mm).

- 2) After disengaging the locking bar, slide the cable out of the connector.

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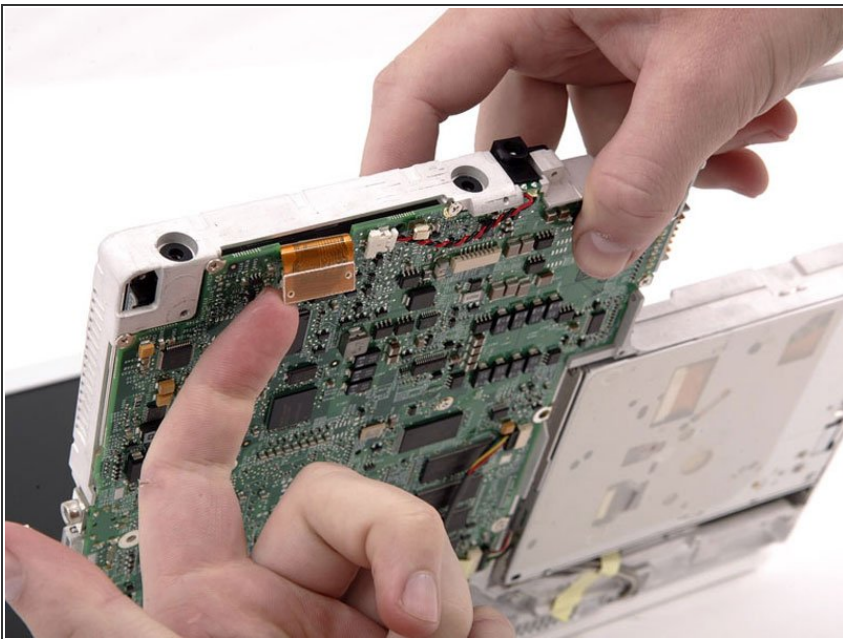
Step 54

- Release the optical drive ribbon clamp as described above. Slide the optical drive ribbon out of its connector.
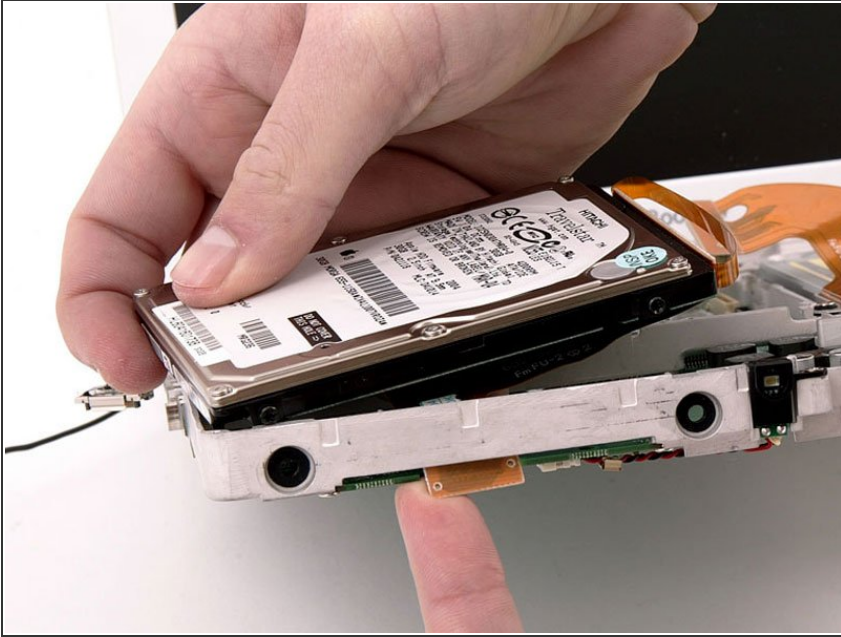
Step 55

- Hold the hard drive in place with one hand while tilting the computer up.

- Disconnect the orange ribbon cable from the logic board.
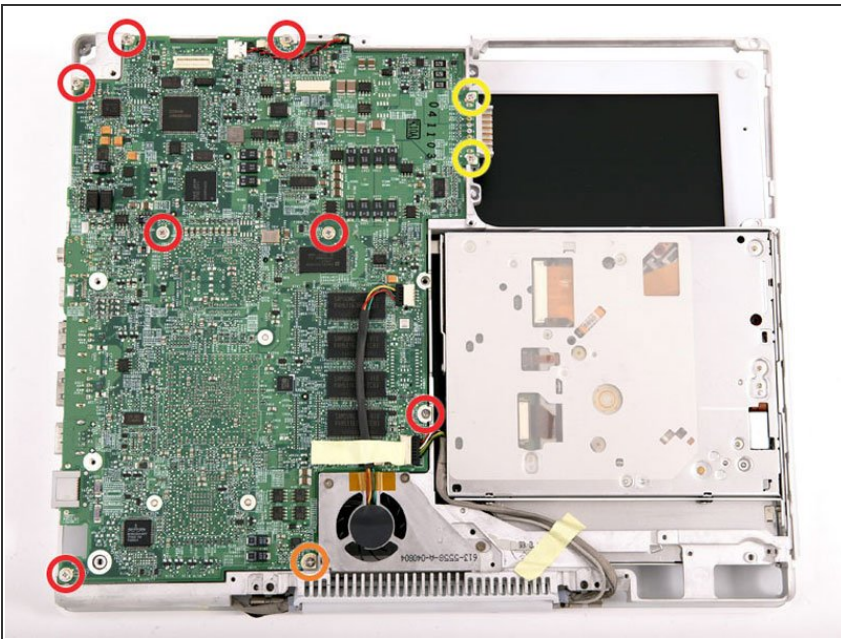
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Step 56

- Lift the hard drive up, carefully guiding the cable through the slot in the lower case.

Step 57

- Close the display and flip the computer over.

- Remove the following 10 screws:
  - Seven 3 mm Phillips.
  - One 3 mm Phillips with a thicker shaft at the bottom right corner of the logic board, next to the fan.
  - Two 7.5 mm Phillips on either side of the battery connector.

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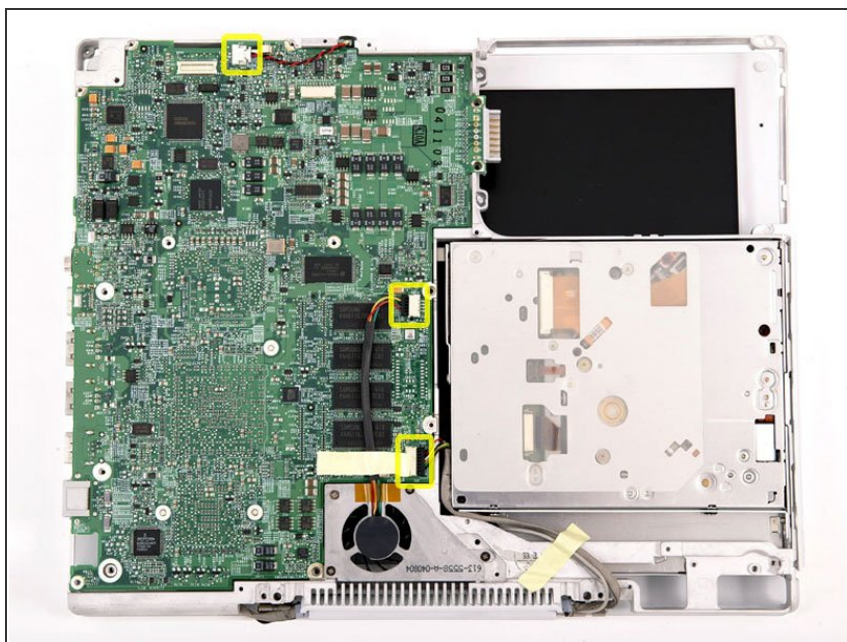
Step 58

- Disconnect the inverter, fan, and sleep light cables from the logic board.

- When replacing the logic board, make sure that the inverter cable is not pinned under the logic board.

Step 59
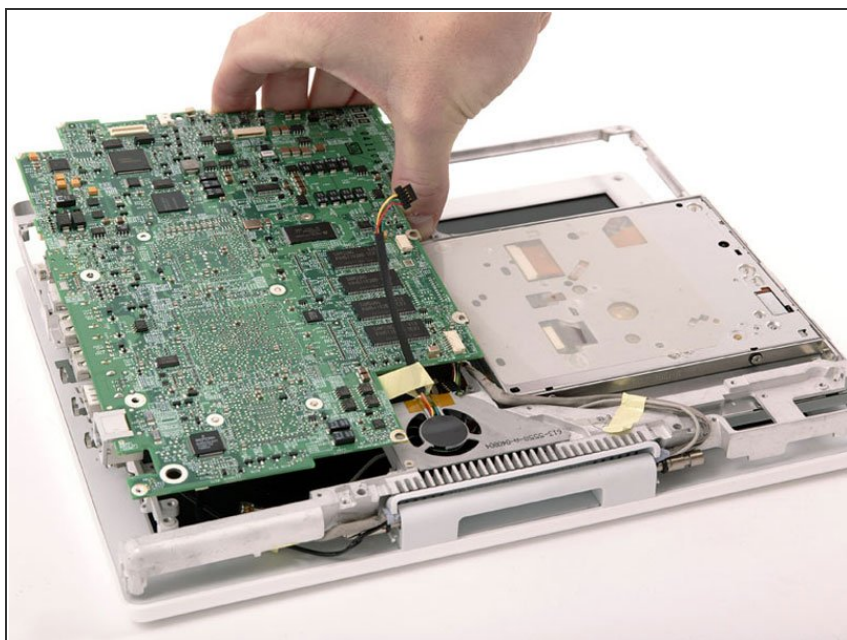
- Lift the logic board carefully from the computer.

- Mind the thin metal EMI fingers surrounding the ports when replacing the logic board.

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

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