MacBook Pro 15" Unibody Late 2008 and Early 2009 Logic Board Replacement

This motherboard includes all ports on the left...

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INTRODUCTION

This motherboard includes all ports on the left side.

Step 1 — Access Door

- With the case closed, place the Unibody top-side down on a flat surface.

- Depress the grooved side of the access door release latch enough to grab the free end. Lift the release latch until it is vertical.

Step 2

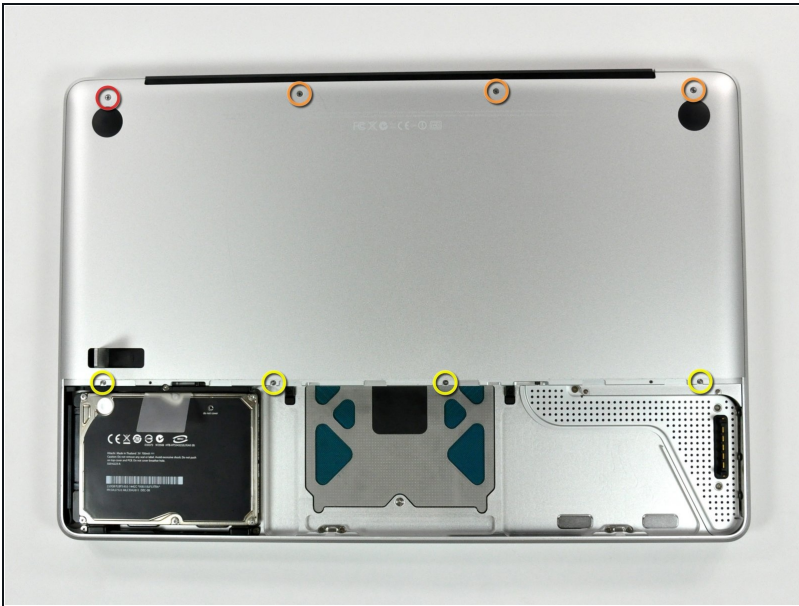- The access door should now be raised enough to lift it up and out of the Unibody.

Step 3 — Battery

- ⓘ Be sure the access door release latch is vertical before proceeding.

- Grab the translucent plastic tab and pull the battery up and out of the Unibody.

- If the latch is depressed it will lock the battery in place.
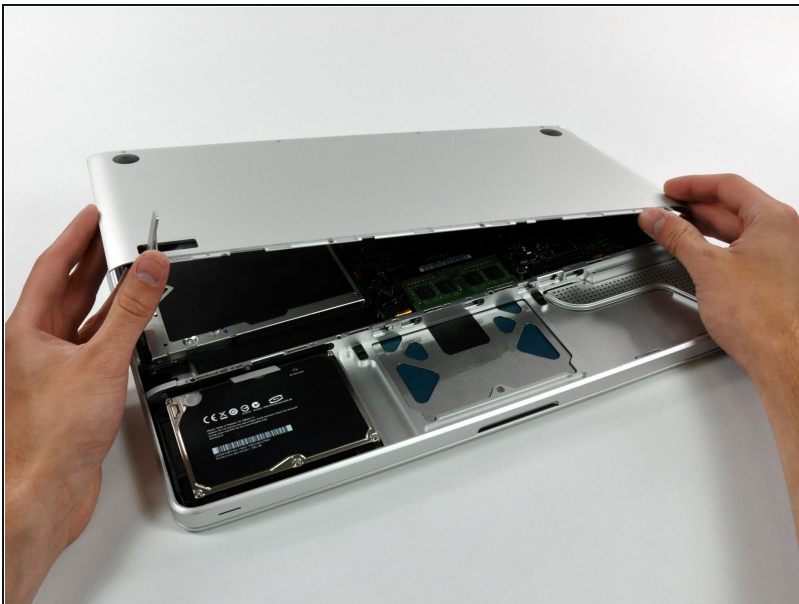
Step 4 — Lower Case

- Remove the following eight screws securing the lower case to the chassis:
  - One 5.4 mm Phillips screw.

  - Three 14 mm Phillips screws.

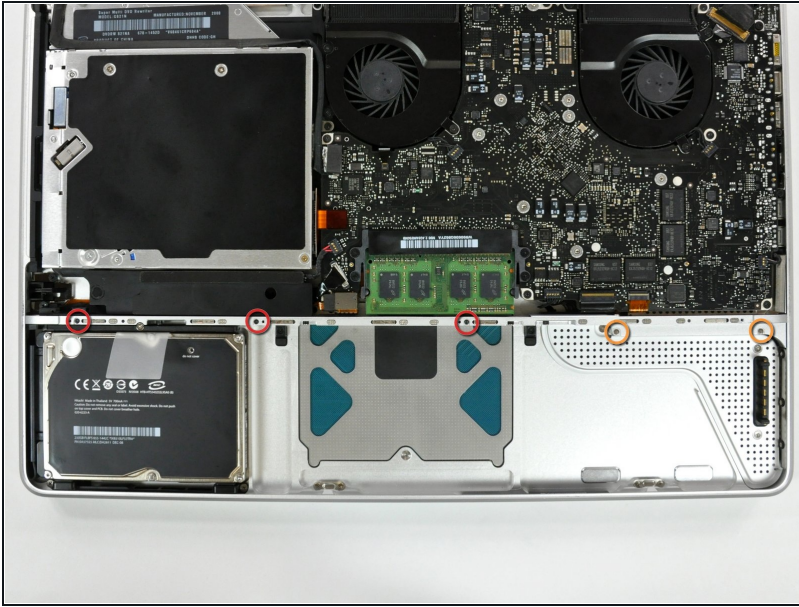 - Four 3.5 mm Phillips screws.

Step 5

- Using both hands, lift and remove the lower case off the upper case.
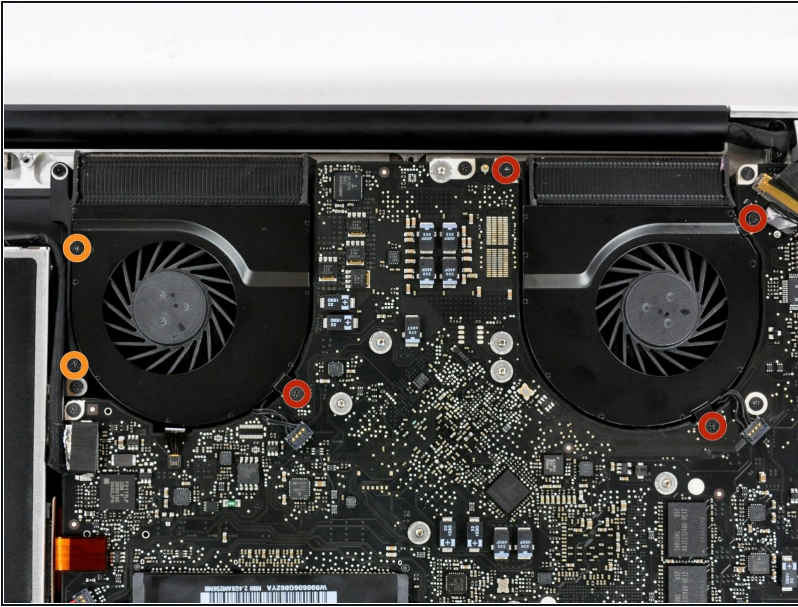
Step 6 — Mid Wall

- Remove the following 5 screws securing the mid wall to the upper case:
  - Three 10.5 mm Phillips screws.
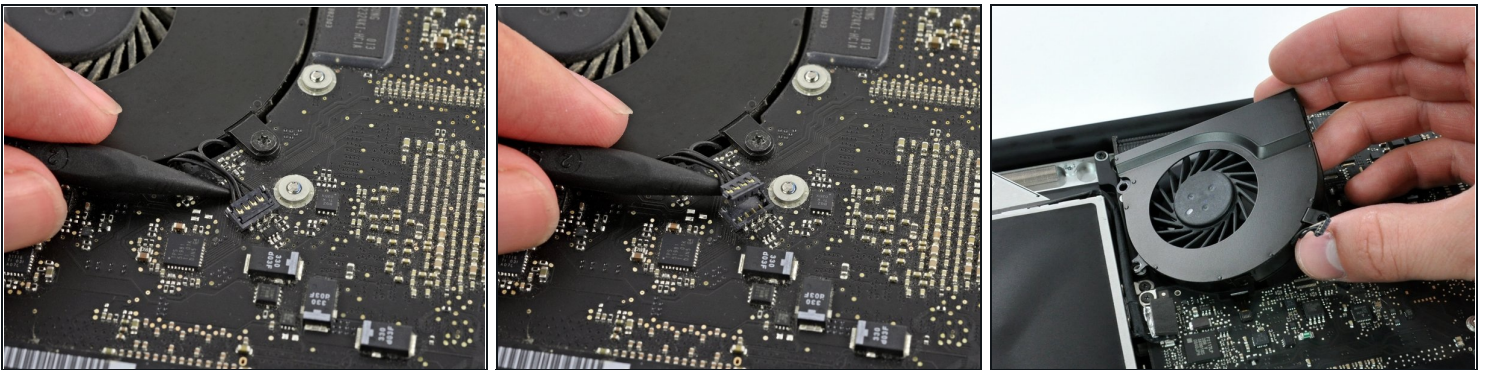 - Two 3.7 mm Phillips screws.

Step 7

- Lift the mid wall out of the upper case.

Step 8 — Logic Board

- Remove the following six screws securing both the right fan and the left fan to the logic board:
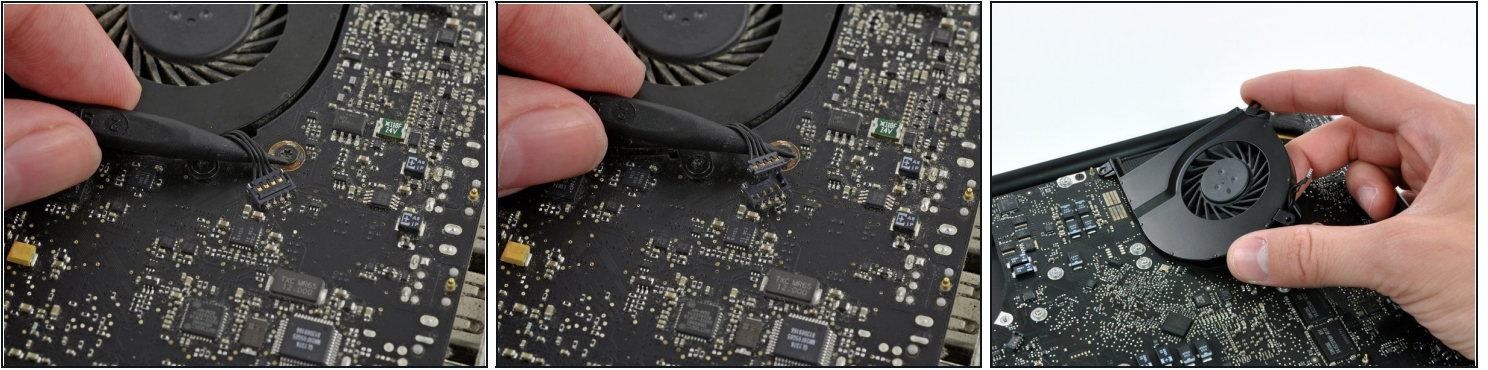 - Four 3.5 mm Phillips screws.
  - Two 3.2 mm Phillips screws.

Step 9

- Use the tip of a spudger to lift the right fan connector straight up from its socket on the logic board.
  ⚠ Be sure to only pry up on the connector itself **not on the socket** or you may damage the machine.

- ⓘ It is useful to twist the spudger axially from beneath the fan cable wires to release the connector.
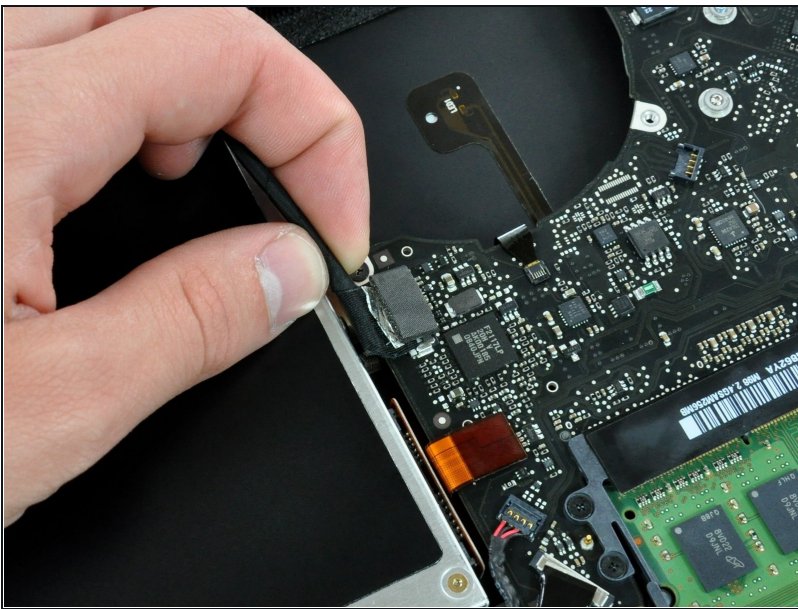
- Remove the right fan from the case.

Step 10

- Use the tip of a spudger to lift the left fan connector straight up from its socket on the logic board.

  ⚠️ Be sure to only pry up on the connector itself **not on the socket** or you may damage the machine.

  ⓘ It is useful to twist the spudger axially from beneath the fan cable wires to release the connector.
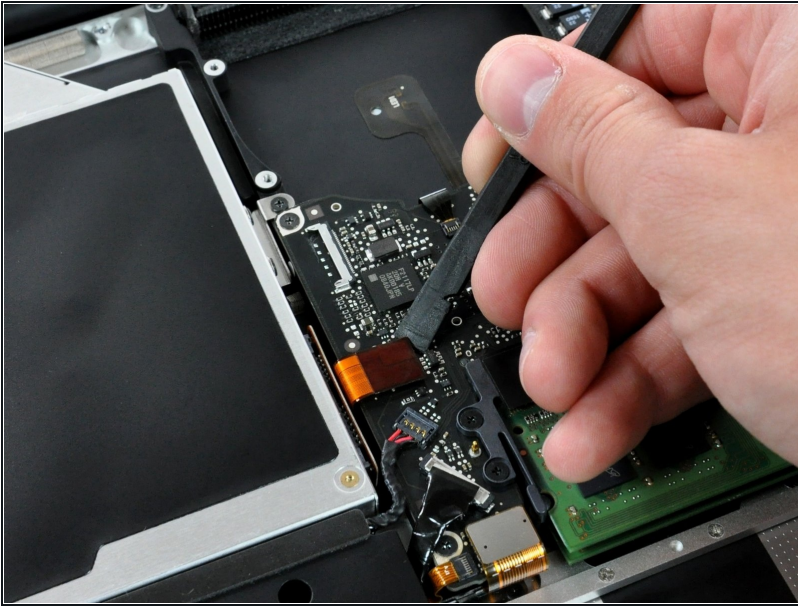
- Remove the left fan from the case.

Step 11

- Remove any adhesive from the camera cable connector.

- Disconnect the camera cable by pulling the male end out of its socket, parallel to the logic board, **do not** lift it upwards.
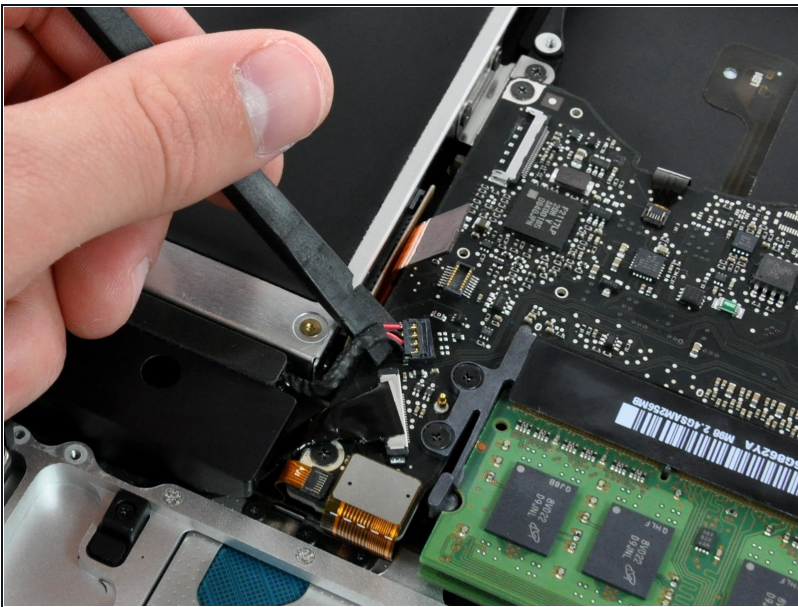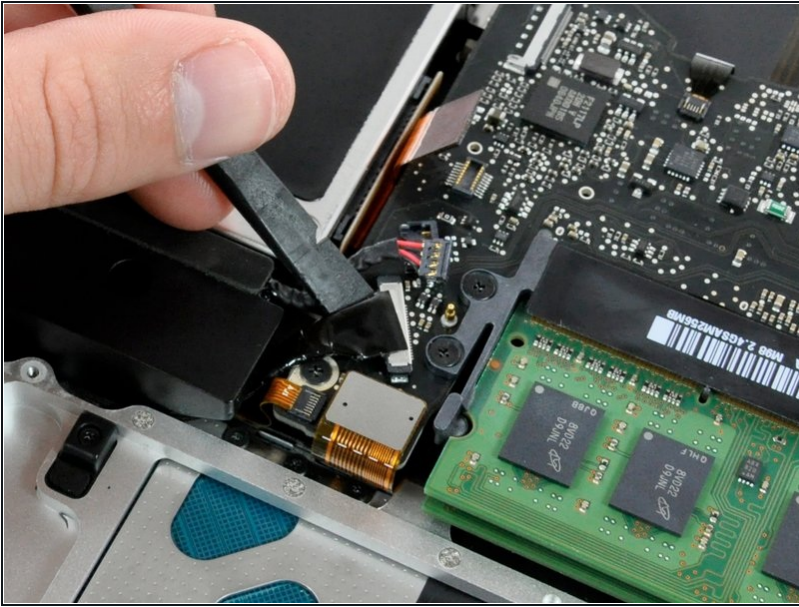
Step 12

- Use a spudger to carefully pry the optical drive connector straight up off its socket on the logic board.
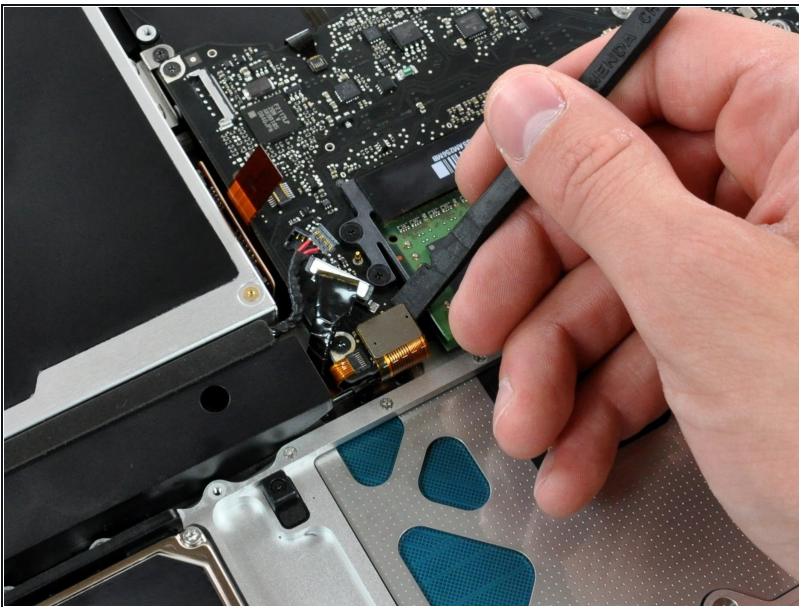
Step 13

- ⓘ If necessary, peel off the foam bumper covering the subwoofer connector.

- Using the flat end of a spudger, pry the subwoofer connector straight up off its socket on the logic board.

- ⚠ Be very careful. This connection is delicate, the socket can be easily broken off the logic board.

Step 14

- Use the flat end of a spudger to pry the silver-colored hard drive cable connector straight up out of its socket on the logic board.
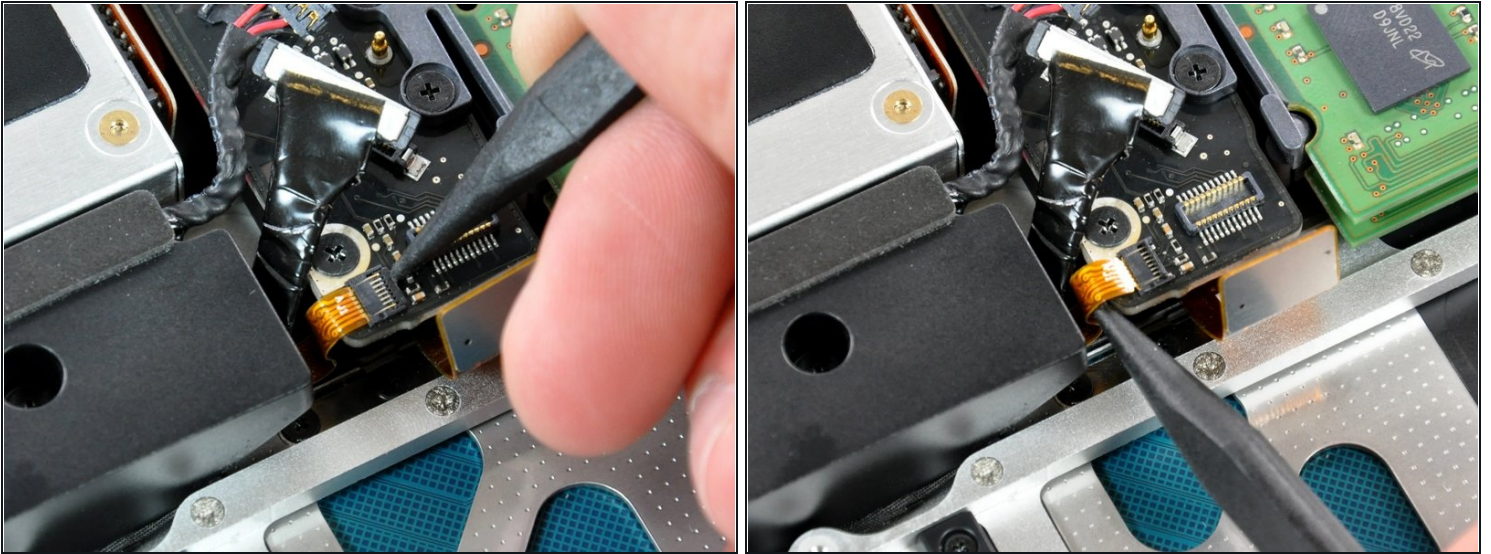
Step 15

- Use a spudger to pry the trackpad connector straight up out of its socket on the logic board.
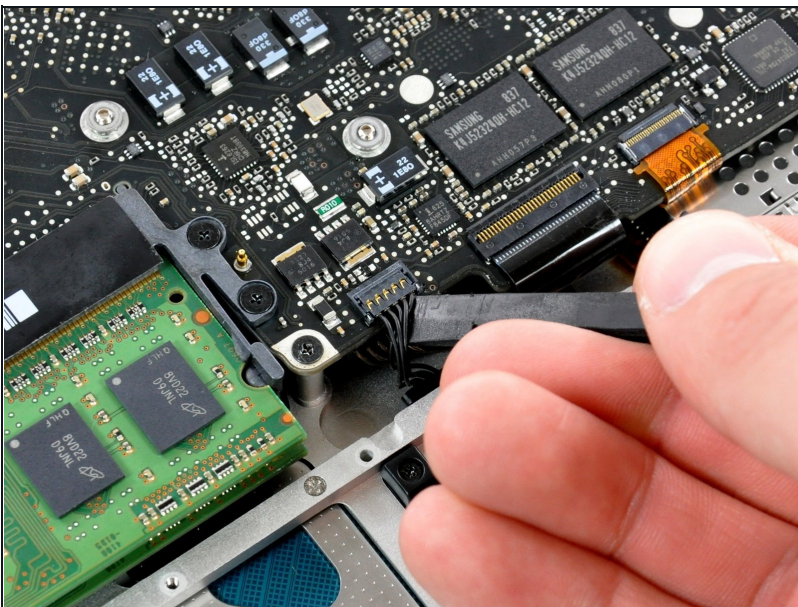
Step 16

- Using the tip of a spudger, flip up the IR/sleep LED ribbon cable retaining flap.

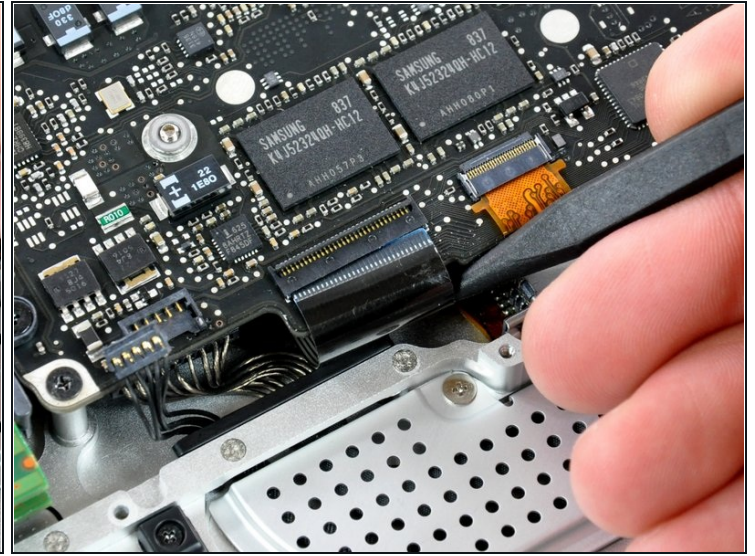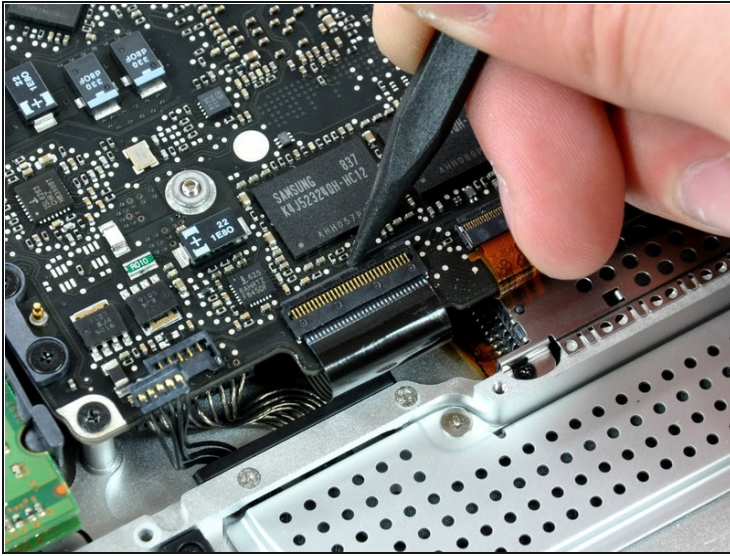- Pull the IR/sleep LED ribbon cable straight out of its socket.

Step 17

- Use a spudger to pry the battery indicator light connector straight up out of its socket on the logic board.

- ⓘ Pry up under the cable wires to avoid pulling the socket itself off of the logic board.
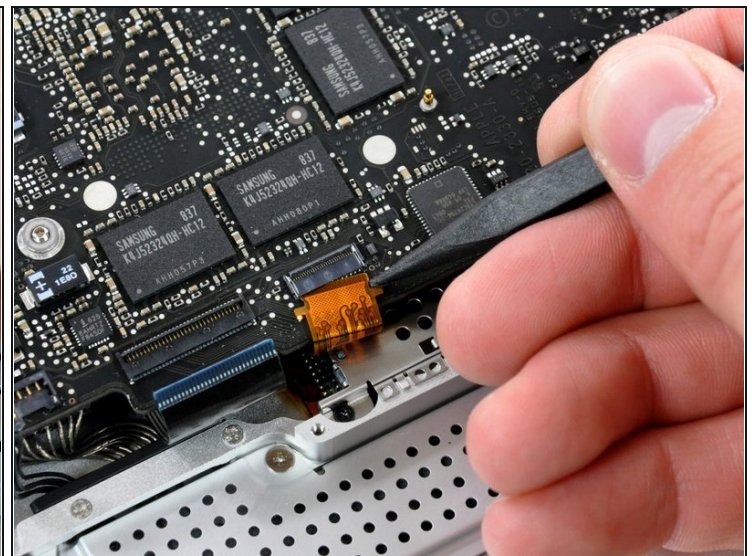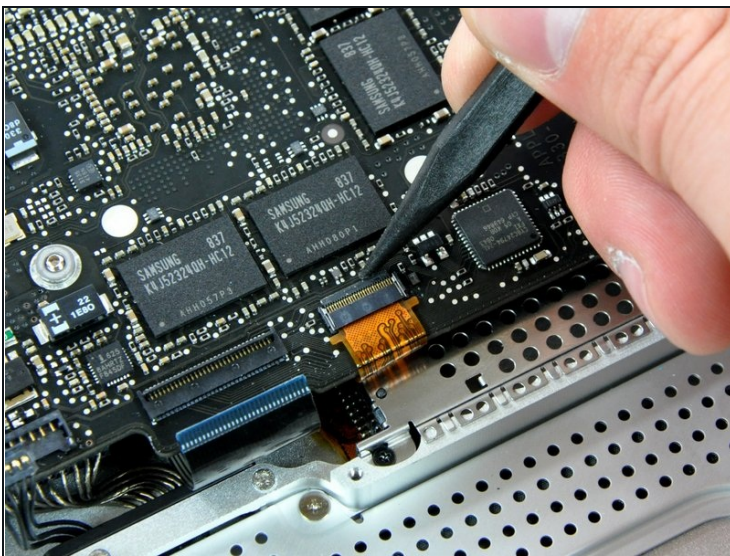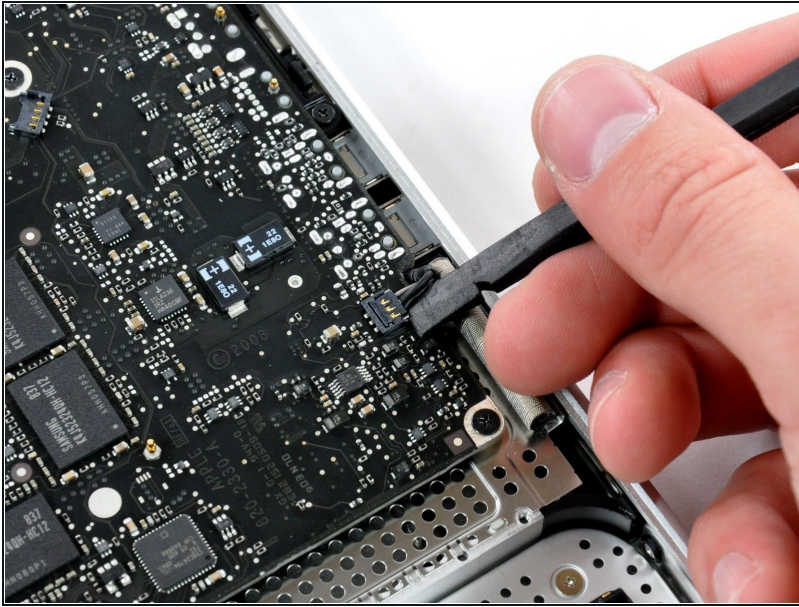
Step 18

- Using the tip of a spudger, flip up the keyboard ribbon cable retaining flap.

- Pull the keyboard ribbon cable straight out of its socket.

- ☑ During reassembly, make sure to fully insert the keyboard ribbon cable back into the ZIF socket.

Step 19

- Using the tip of a spudger, flip up the express card cage ribbon cable retaining flap.

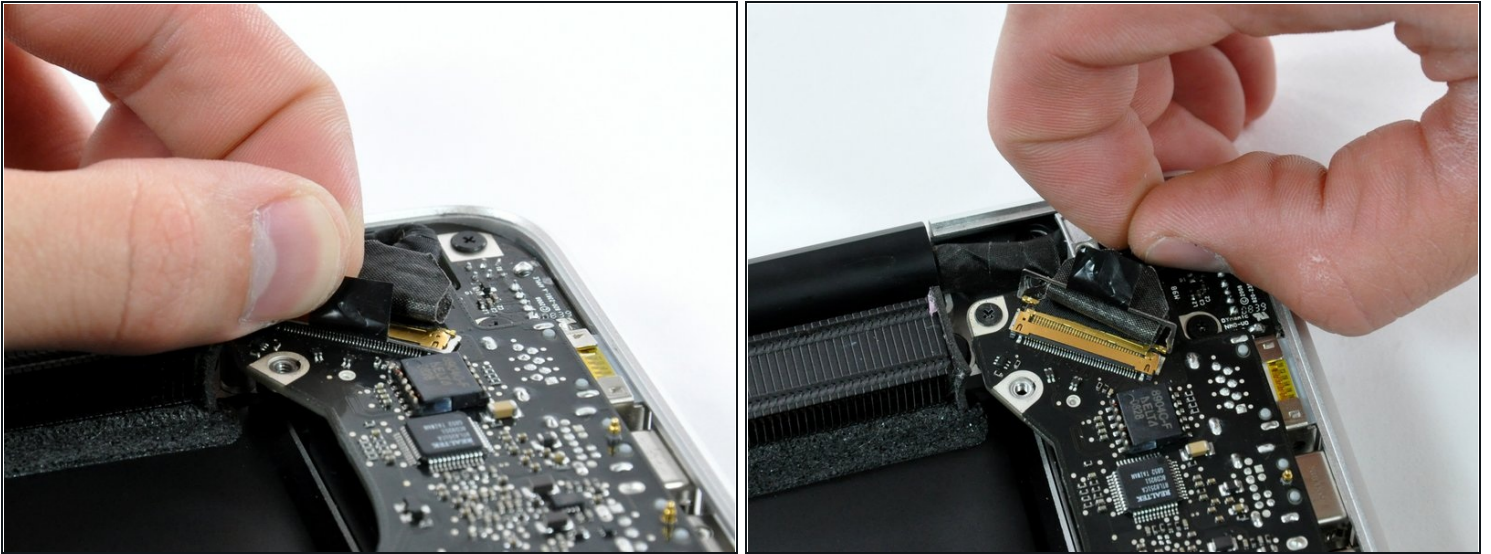- Pull the express card cage ribbon cable straight out of its socket.

Step 20

- Using the flat end of a spudger, pry the microphone cable connector straight up out of its socket on the logic board.

- ⓘ Pry up under the cable wires to avoid pulling the socket itself off of the logic board.
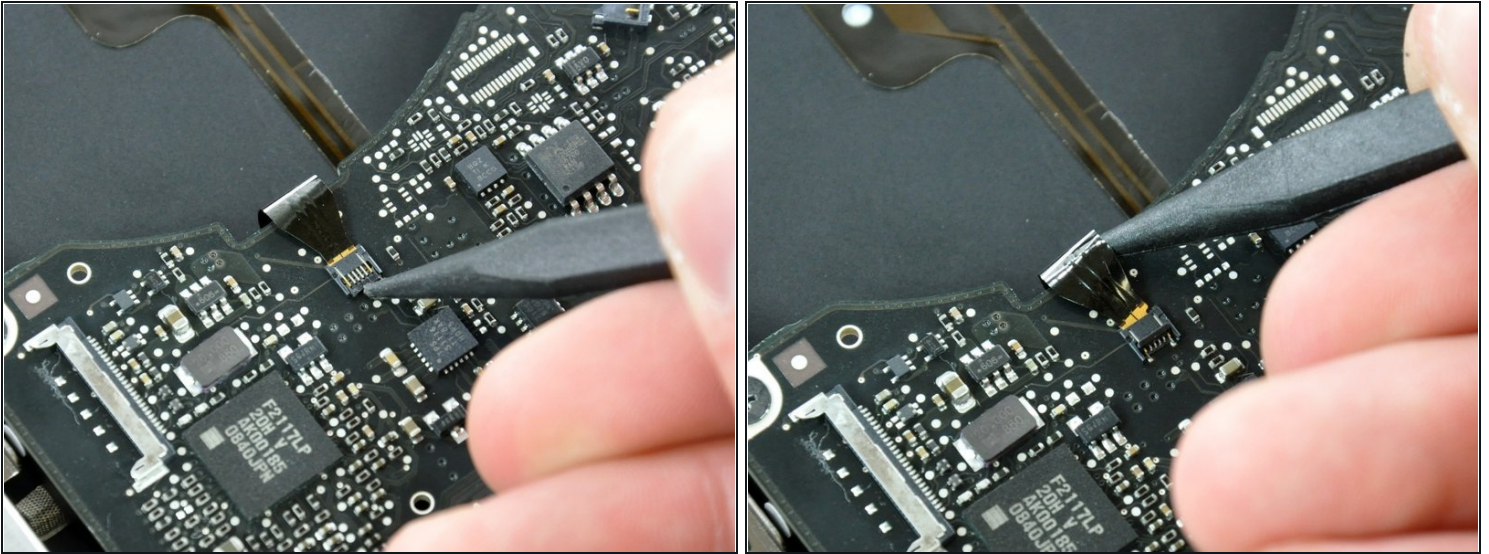
Step 21

- Grab the plastic pull tab secured to the display data cable lock and rotate it toward the DC-in side of the computer.

- Pull the display data cable connector straight away from its socket.

- ⓘ When disconnecting the display data cable, do not pull on the black tab secured to the cable lock. We recommend wiggling the cable while applying tension to slowly "walk" the connector out of its socket.

- ⊡ Make sure the display data cable is placed correctly in its socket during reassembly. Failure to do so will result in a partially visible display or no display image at all.
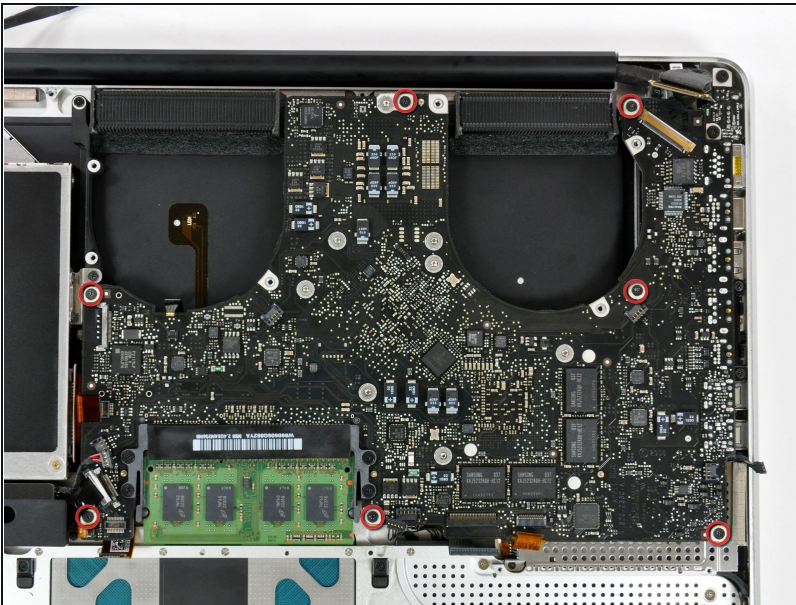
Step 22

- Locate the keyboard backlight ribbon cable (near the left fan space).

- Using the tip of a spudger, flip up the keyboard backlight ribbon cable retaining flap.

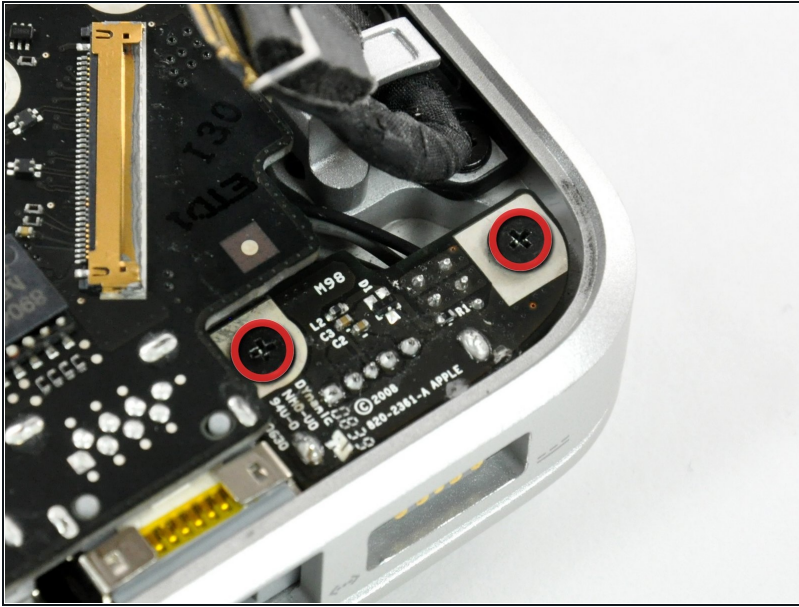- Pull the keyboard backlight ribbon cable straight out of its socket.

Step 23

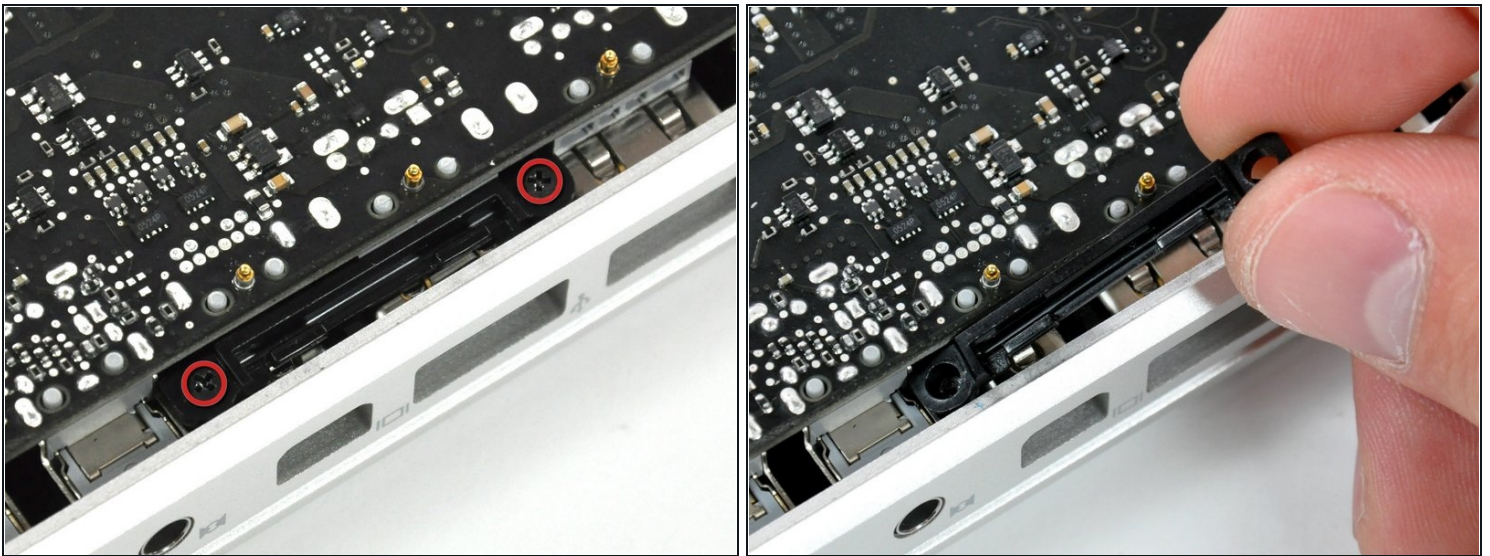- Remove seven 3.2 mm Phillips screws securing the logic board to the upper case.

⚠ Do not remove the logic board yet! There are connectors attached to the underside of the logic board that must first be disconnected.

Step 24

- Remove two 7 mm Phillips screws securing the DC-in board to the upper case.

- ⓘ Note: This step is not completely necessary, but it will make it easier to disconnect the cable that is connected to the DC-in board.
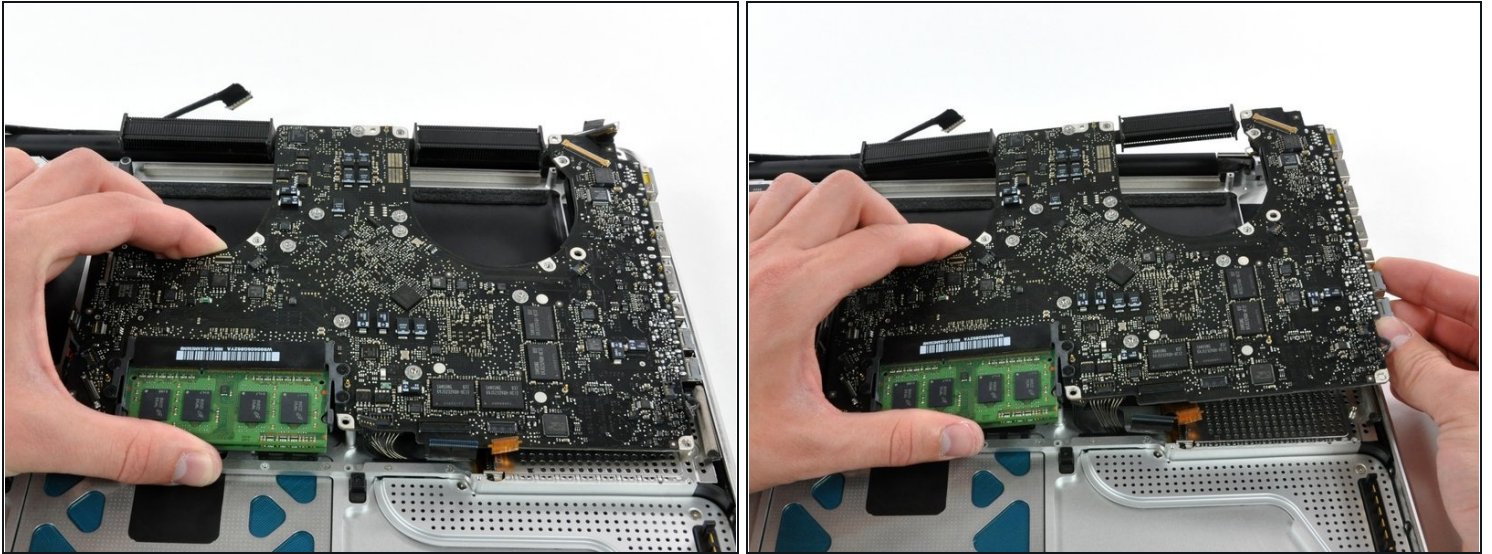
Step 25

- Remove two 3.5 mm Phillips screws securing the bottom case clip to the upper case.

- Lift the bottom case clip out of the upper case.

- ☑ Some MacBook Pro Unibodies do not have a bottom case clip and do not require this step.
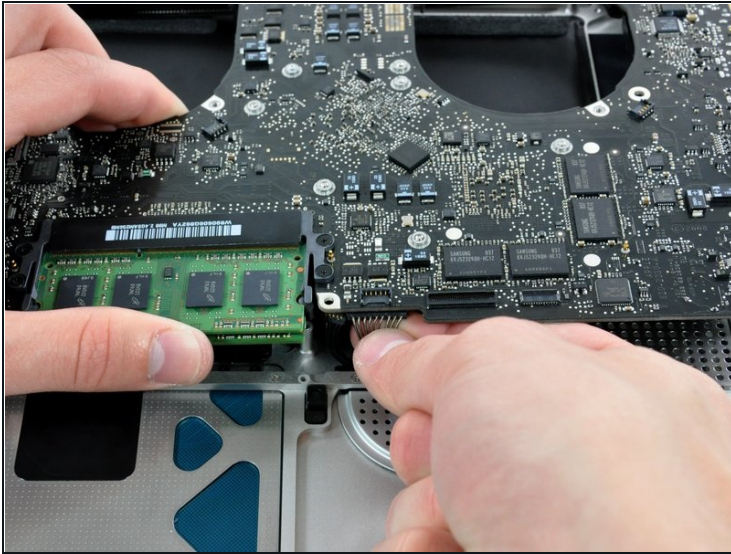
Step 26

- Carefully lift the logic board assembly from the left side and work it out of the upper case, minding the port side that may get caught during removal.

⚠️ **Do not** entirely remove the logic board yet!

ⓘ Ensure that the logic board is free from all connections to the upper case (except the battery connector) before proceeding.

☑ During reassembly, ensure all connectors and cables are not placed underneath the logic board. Some of the ribbon cables are very thin and fragile.
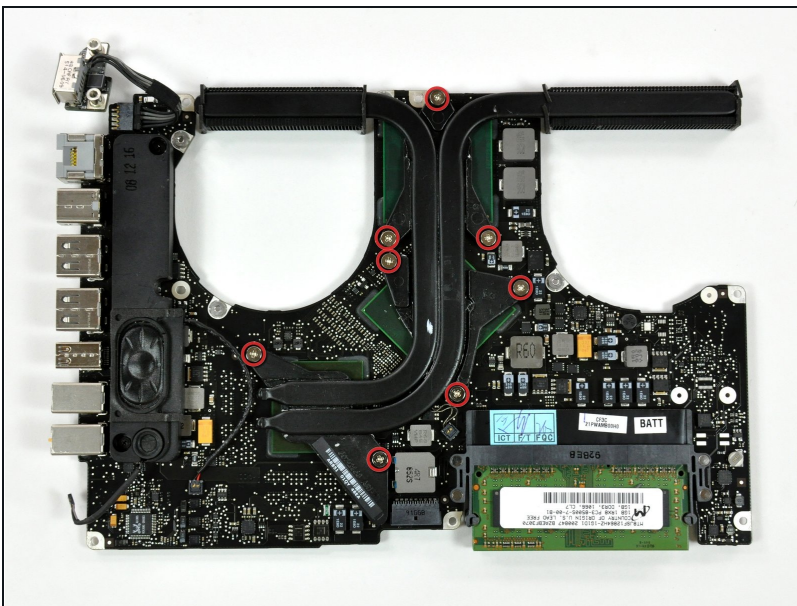
Step 27

- Lift the logic board enough to grab the battery connector and pull it straight away from its socket on the logic board.

- Lift the logic board assembly out of the upper case.

Step 28 — Logic Board

- Remove eight 8.4 mm Phillips screws securing the heat sink to the logic board.

- ⚠ Don't remove the heat sink yet! There is a delicate connector that must first be disconnected.

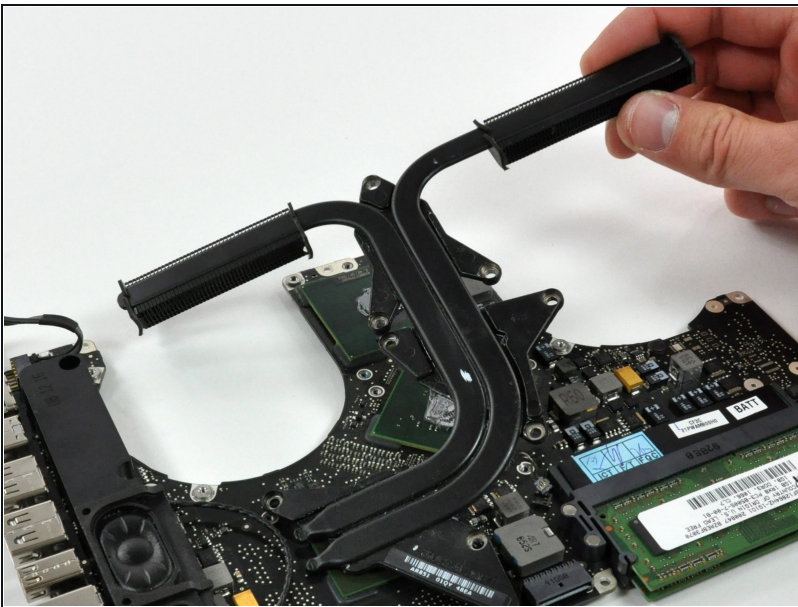- ⊡ A spring is held under each of these screws.

Step 29

- Use the tip of a spudger to pry the thermal sensor connector up off the logic board.

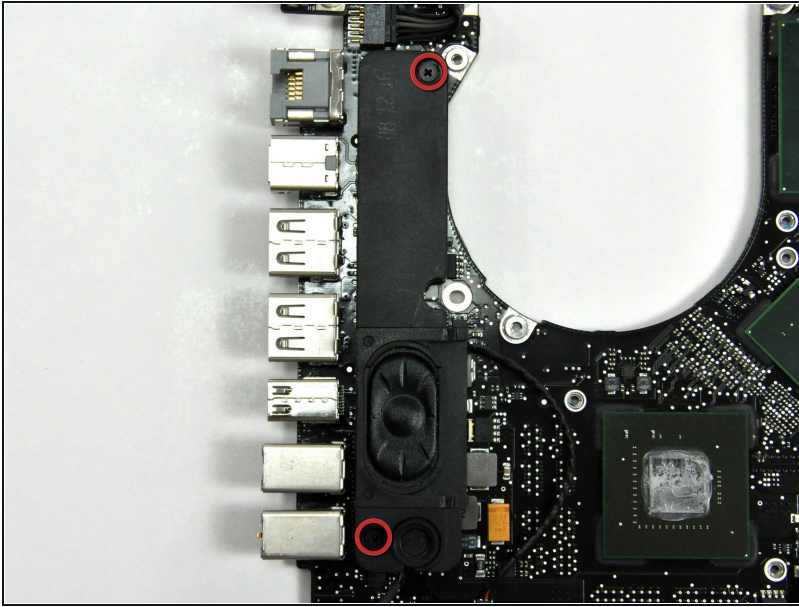⚠ This connector is especially delicate, so be sure to use extreme caution when removing it.

Step 30

- Gently lift the heat sink off the logic board.

ⓘ 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.
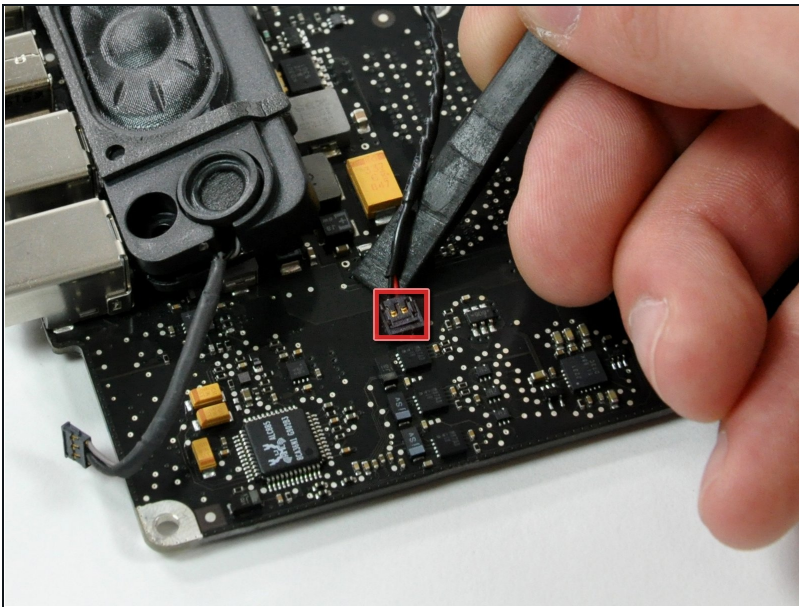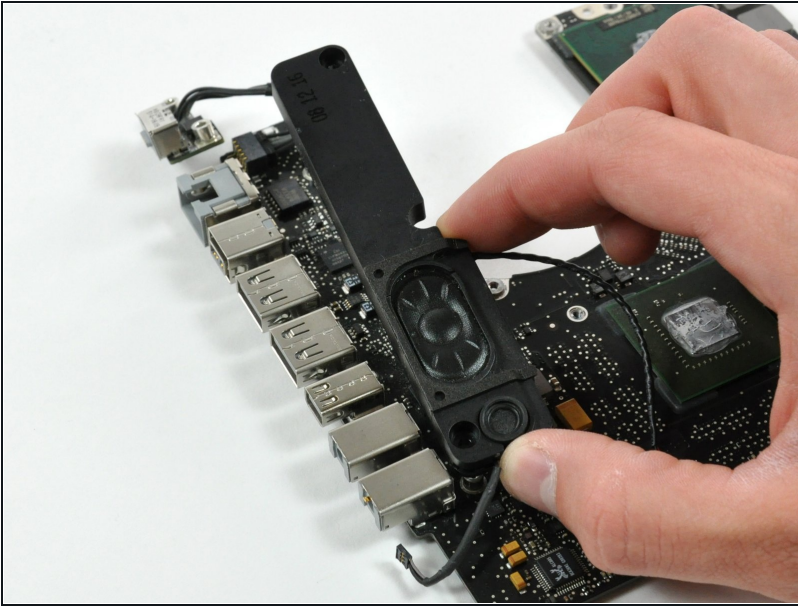
Step 31

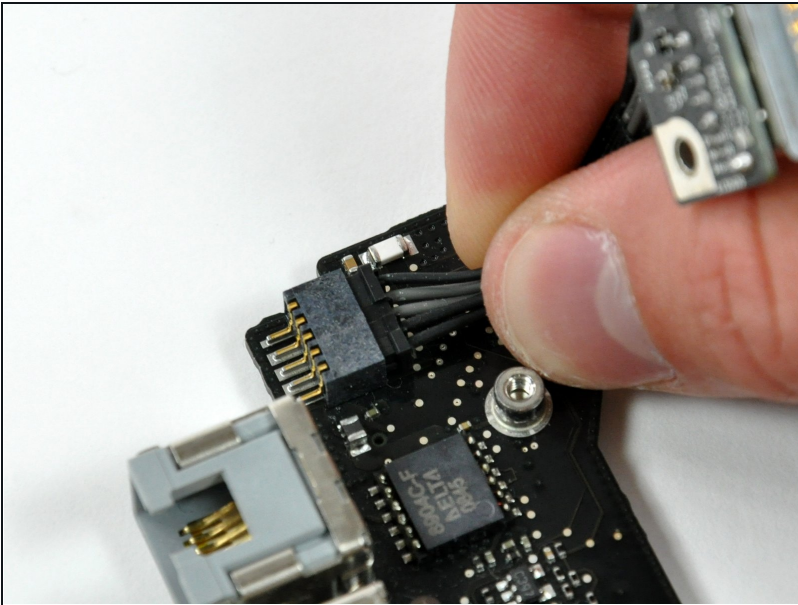- Remove the two 5 mm Phillips screws securing the left speaker to the logic board.

Step 32

- ⓘ If necessary, peel up the orange Kapton tape covering the left speaker connector.

- Use the flat end of a spudger to pry the left speaker connector up off the logic board.

Step 33
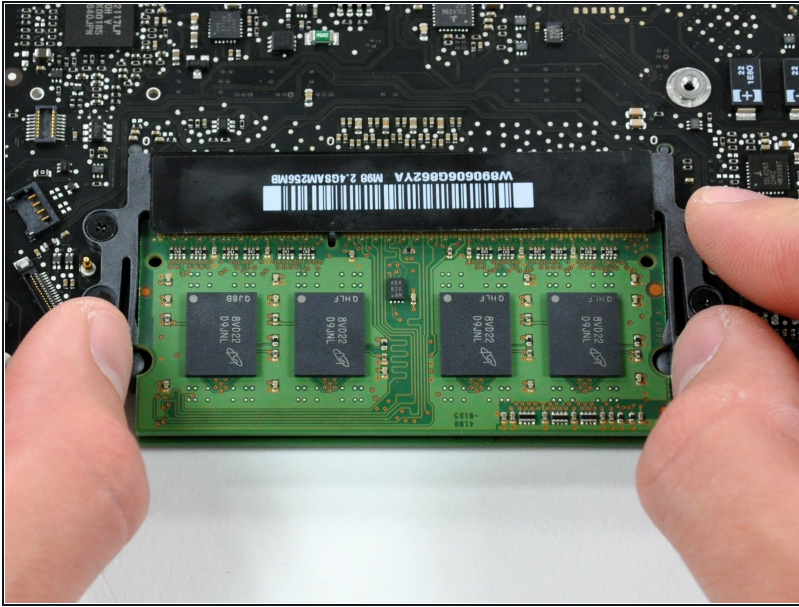

- Lift the left speaker assembly out of the logic board.

Step 34

- Disconnect the DC-In Board connector from the logic board by pulling it straight away from its socket.
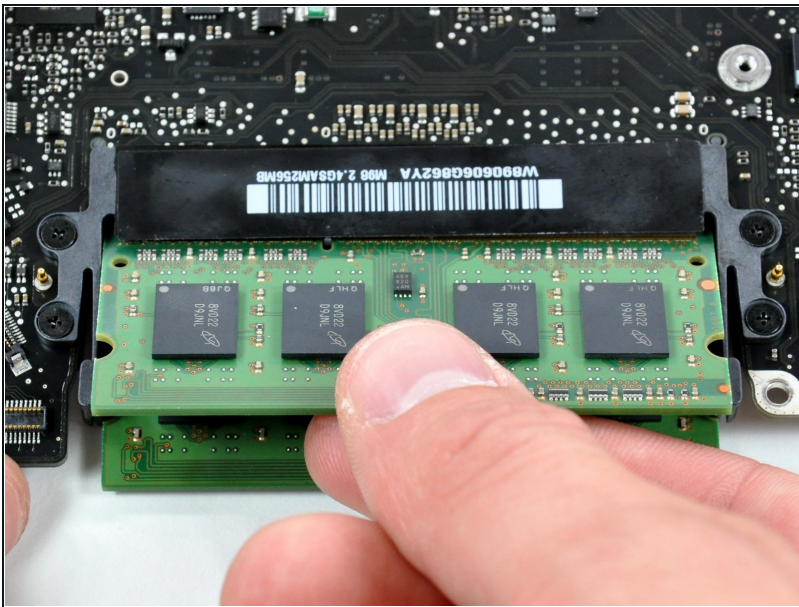
Step 35

- Release the tabs on each side of the RAM chip by simultaneously pushing each tab away from the chip.

- ⓘ These tabs lock the chip in place and releasing them will cause the chip to "pop" up.

Step 36

- After the RAM chip has popped up, pull it straight out of its socket.

- ⓘ Repeat this process if a second RAM chip is installed.

- ⬚ When reinstalling your logic board, don't forget to apply a new layer of [thermal paste](#).

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