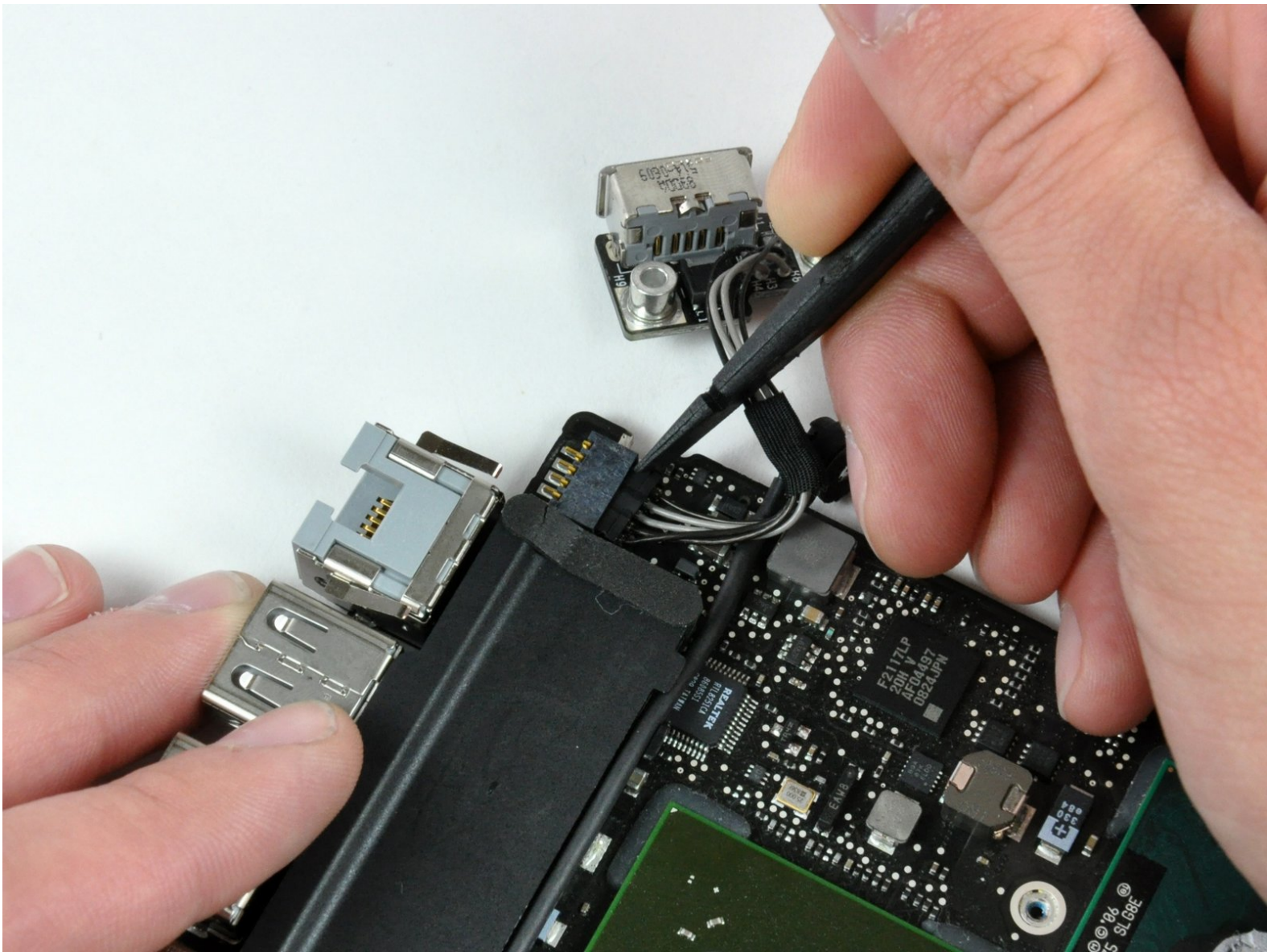# MacBook Unibody Model A1278 Logic Board Replacement

Written By: Walter Galan

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INTRODUCTION

This motherboard includes all ports on the left side.

TOOLS:

- Arctic Silver ArctiClean (1)
- Arctic Silver Thermal Paste (1)
- Phillips #00 Screwdriver (1)
- Spudger (1)

PARTS:

- MacBook Unibody (Model No. A1278) 2 GHz Logic Board (1)
- MacBook Unibody (Model No. A1278) 2.4 GHz Logic Board (1)

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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.
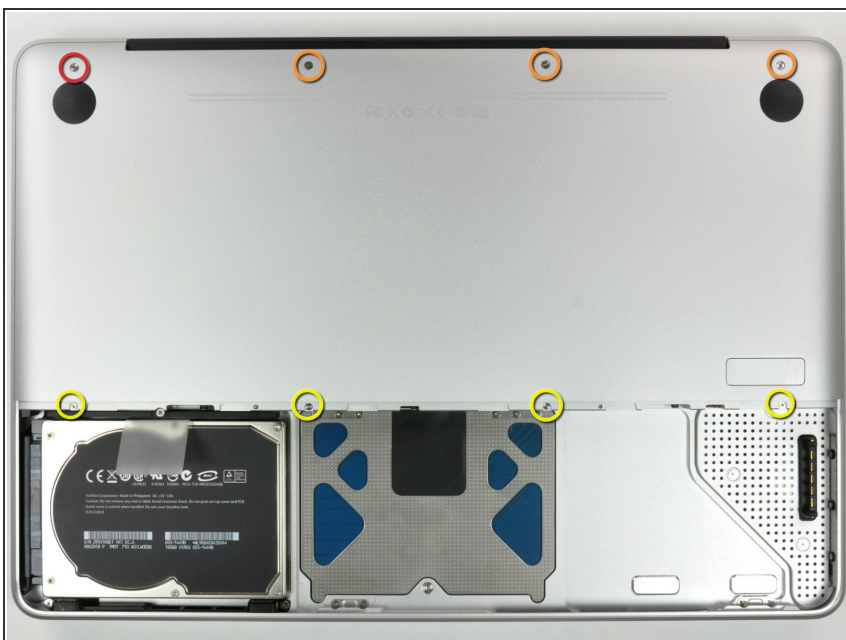
Step 2
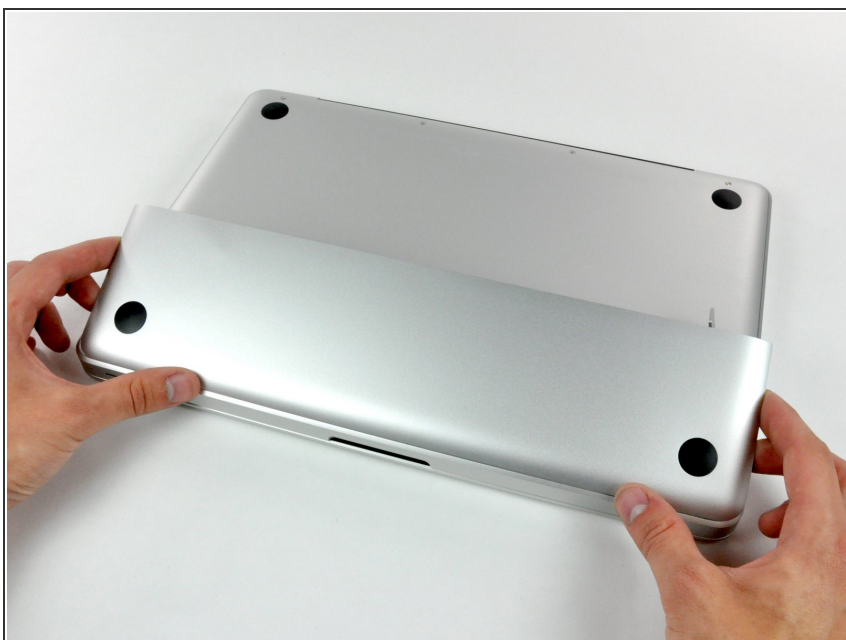
- The access door should now be raised enough to lift it up and out of the Unibody.

Step 3 — Battery

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

- Grab the white plastic tab and pull the battery up and out of the Unibody.
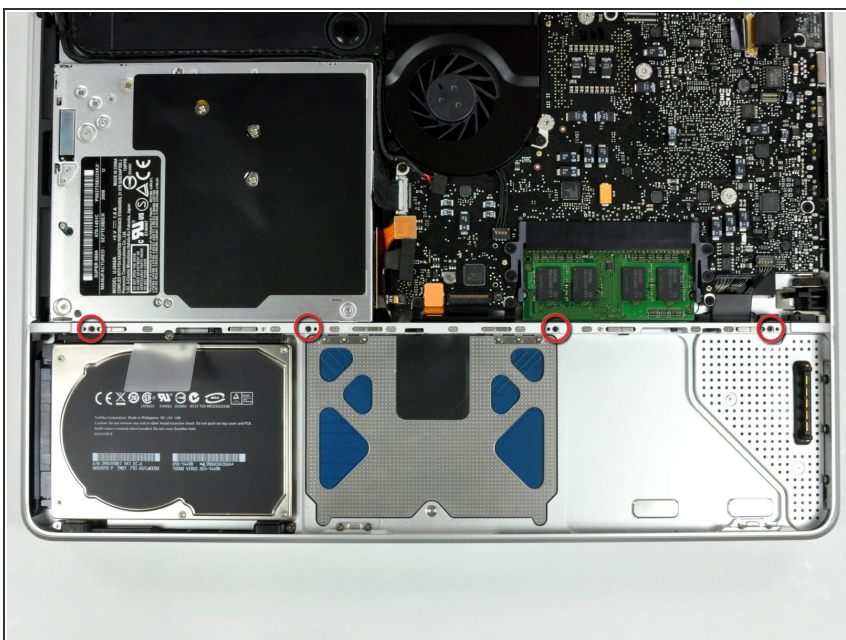
Step 4 — Lower Case

- Remove the following eight screws securing the lower case to the chassis:
  - One 3 mm Phillips screw.
  - Three 13.5 mm Phillips screws.
  - Four 3.5 mm Phillips screws.

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Step 5

- Using both hands, lift and remove the lower case off the upper case.

Step 6 — Mid Wall

- Remove the four 10.3 mm Phillips screws securing the mid wall to the upper case.

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Step 7

- Lift the mid wall out of the upper case.

Step 8 — Fan
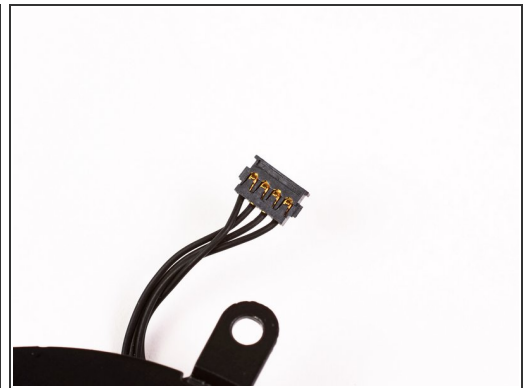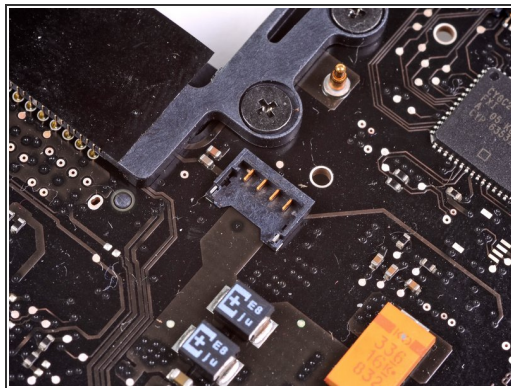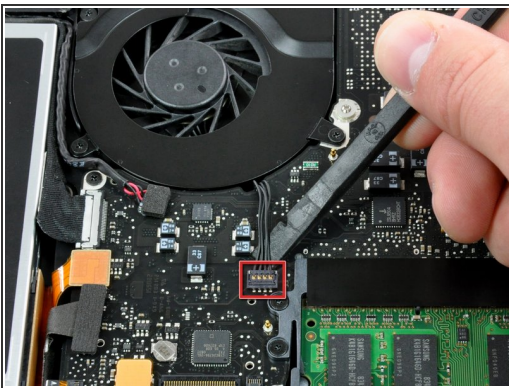
- Use a spudger to pry the fan connector straight up off the logic board.

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

- ⚠ The fan socket and the fan connector can be seen in the second and third pictures. Be careful not to break the plastic fan socket off the logic board as you use your spudger to lift the fan connector straight up and out of its socket. The layout of the logic board shown in the second picture may look slightly different than your machine but the fan socket is the same.
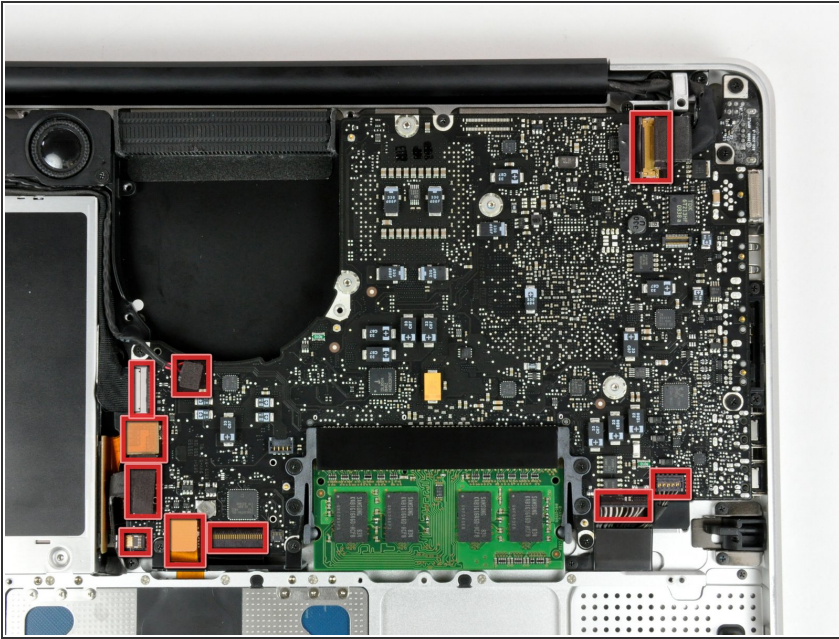
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Step 9

- Remove the following three screws securing the fan to the upper case:
  - Two 5 mm Phillips screws.
  - One 7 mm Phillips screw.
- (i) The longer of the three screws belongs in the upper left corner of the fan.
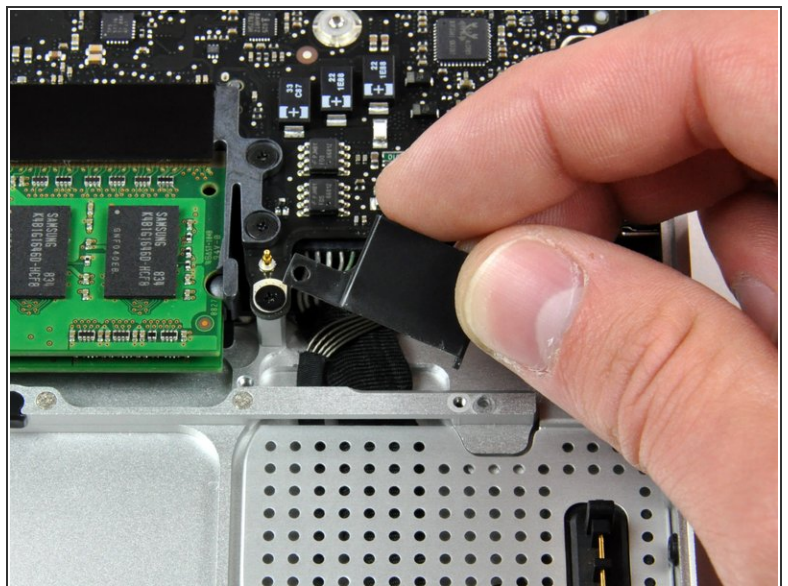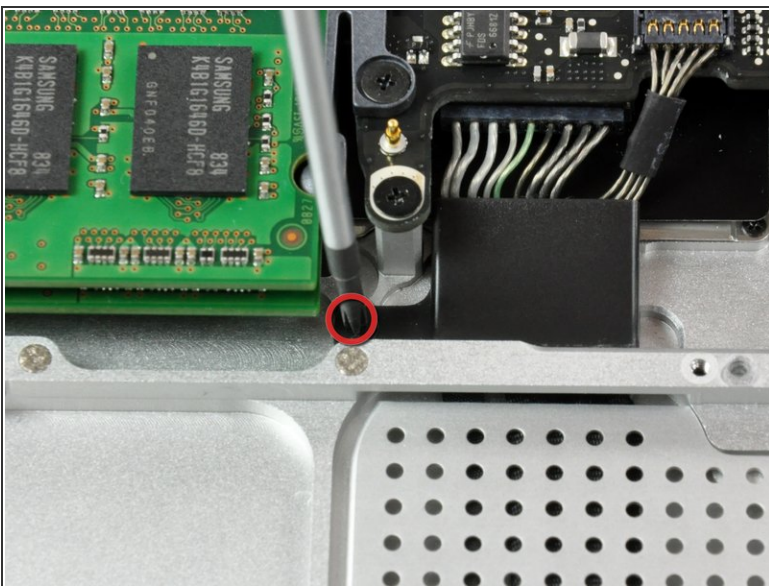
Step 10

- Lift the fan out of the upper case.
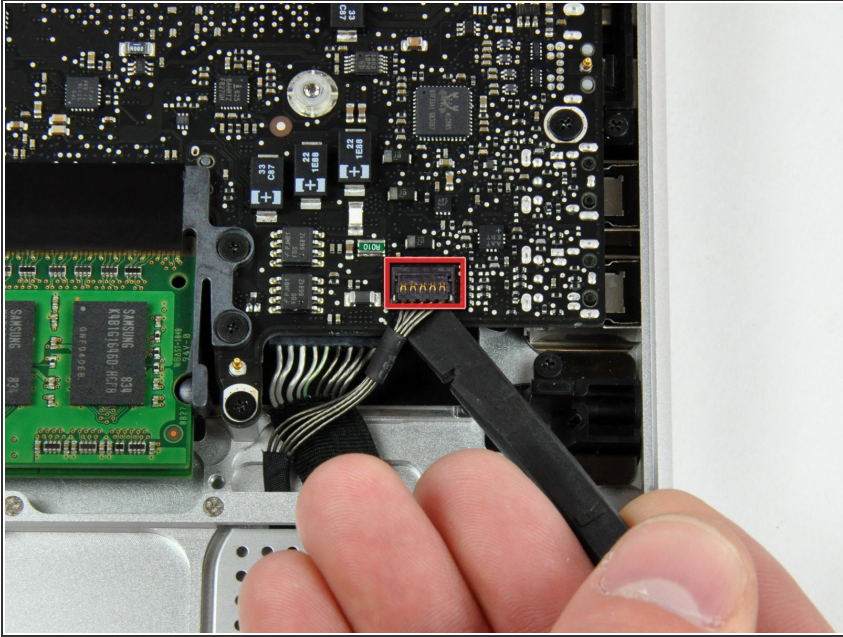
Step 11 — Logic Board

- (i) In the next few steps, you will disconnect the highlighted cables which connect the logic board to the upper case.

- Each connector is different, so the following steps will show you how disconnect each in detail.
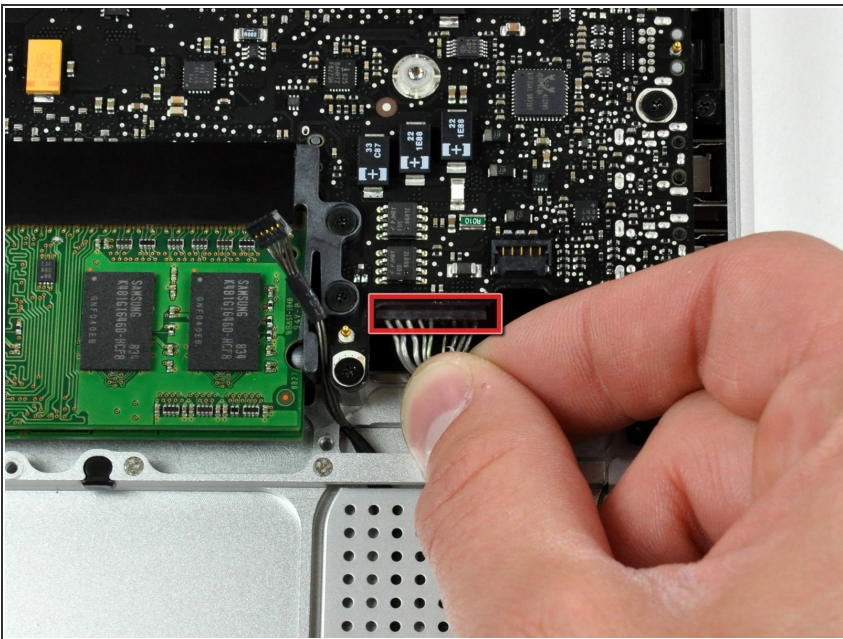
Step 12

- Remove the single Phillips screw securing the battery cable cover to the upper case.

- Remove the battery cable cover from the upper case.

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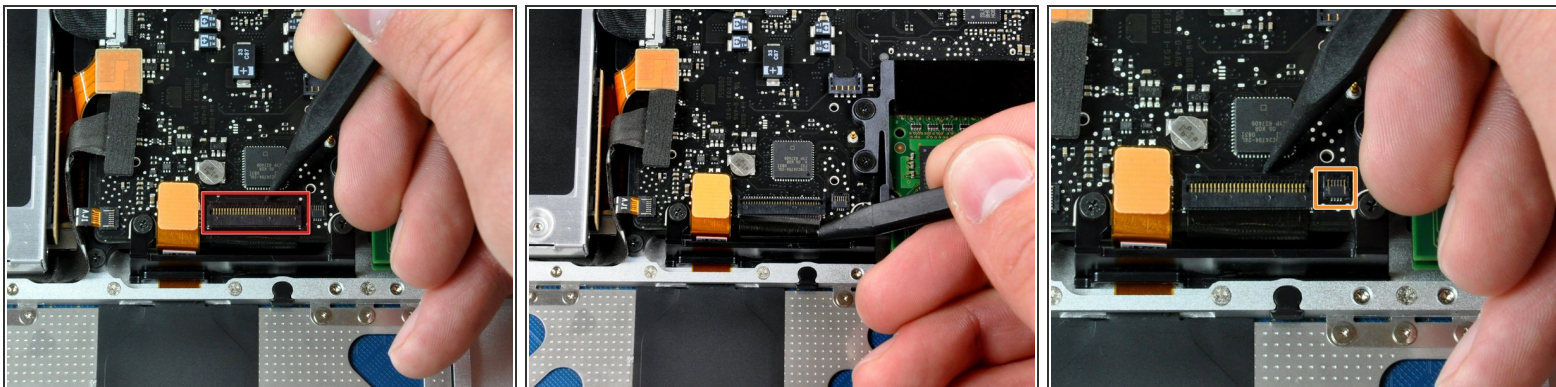
Step 13

- Use a spudger to pry the battery level indicator cable connector straight up off the logic board.
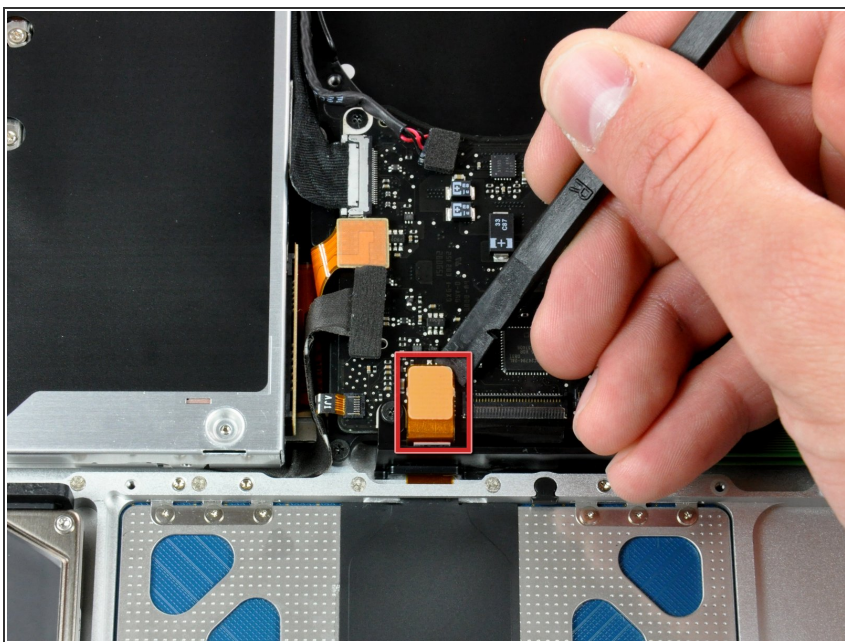
Step 14

- Disconnect the battery cable connector by pulling it straight away from the logic board.

- (i) If you cannot grasp the cable with your fingers, a spudger and tweezers may be helpful for removal.

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Step 15

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

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

- If the smaller connector at the right side of the keyboard ribbon cable is populated by another small black ribbon cable, remove it in a similar way to the above.
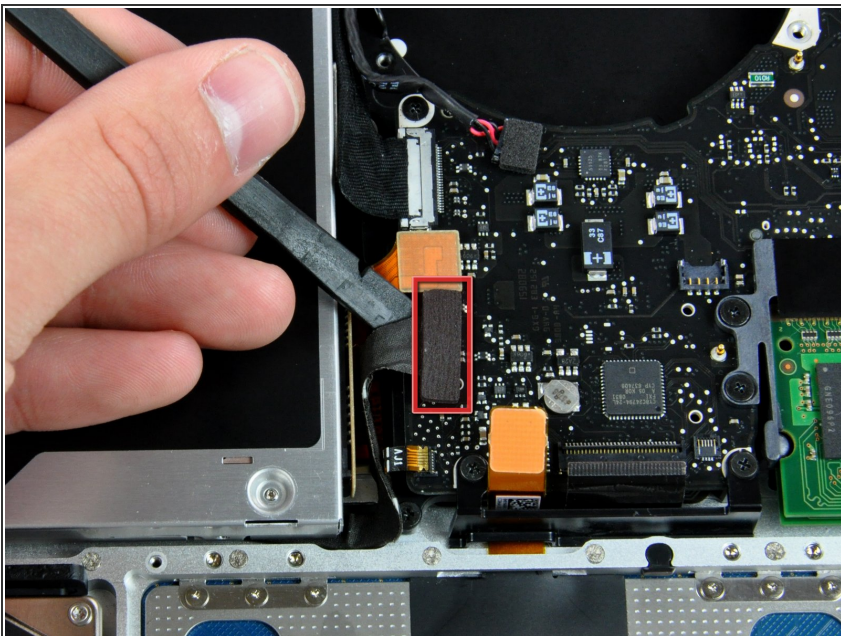
Step 16

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

Step 17
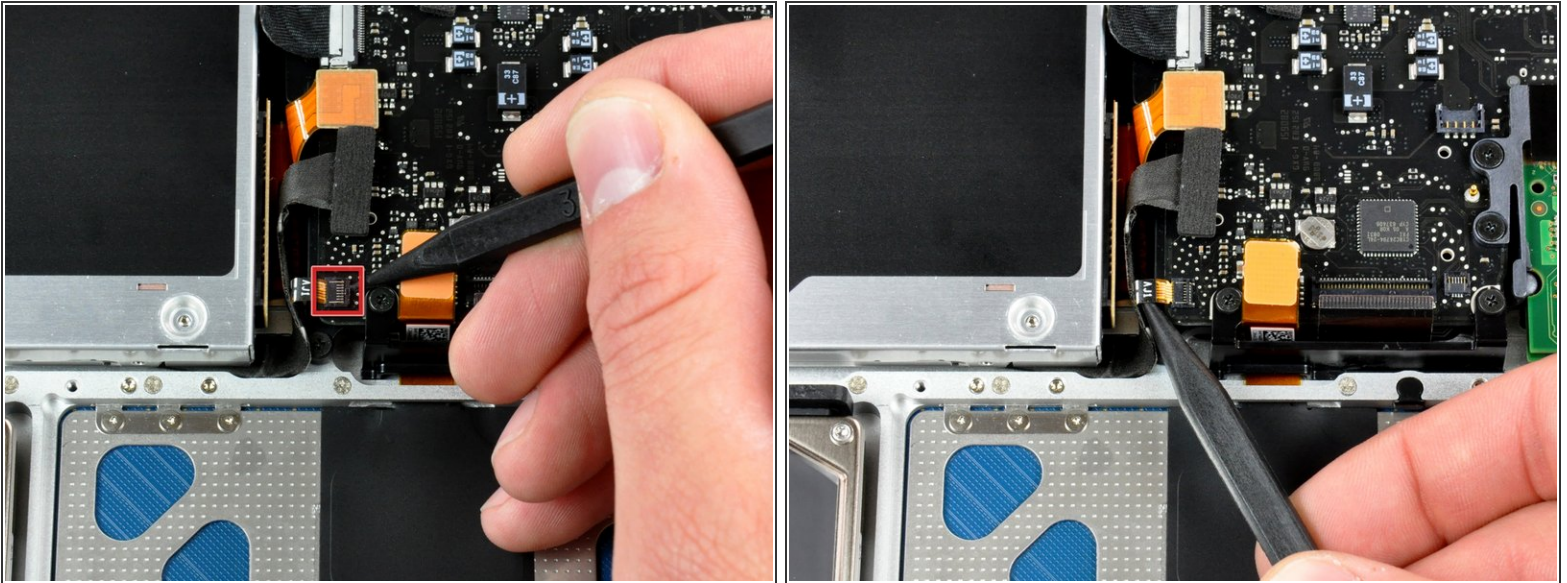
- Use the tip of a spudger to flip up the locking lever to release the IR sensor ribbon cable from its socket.

- Use the tip of a spudger to pull the IR sensor ribbon cable straight away from the logic board.
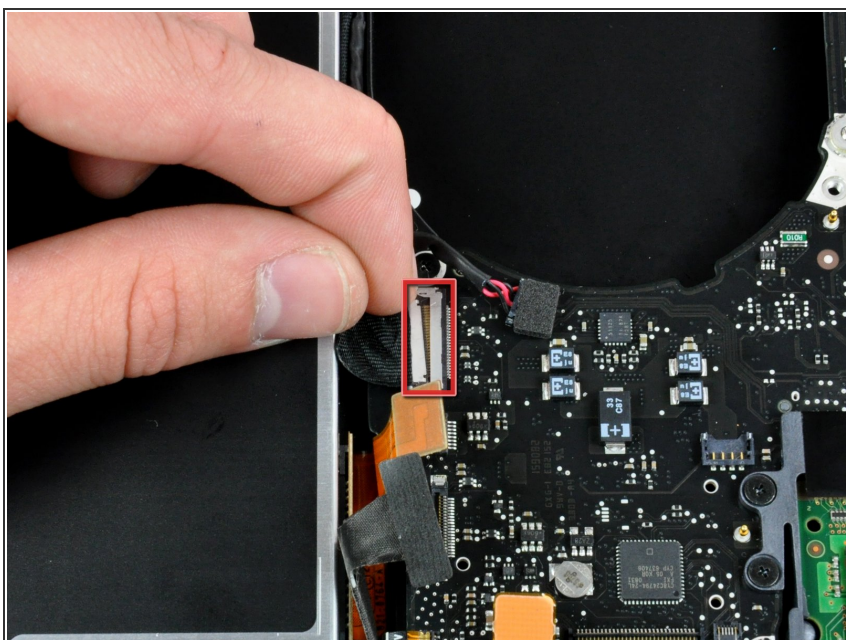
Step 18

- Use the flat end of a spudger to pry the hard drive cable connector straight up off the logic board.

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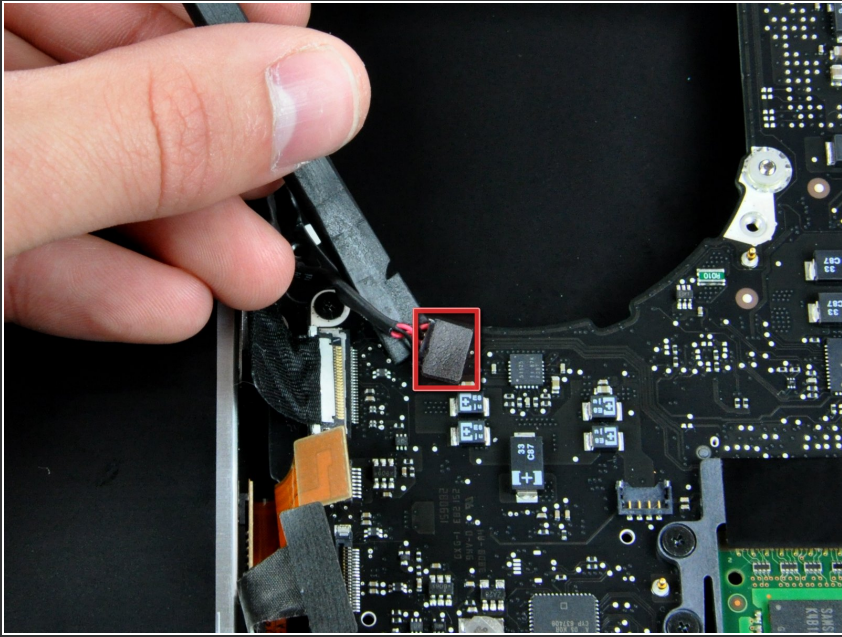
Step 19
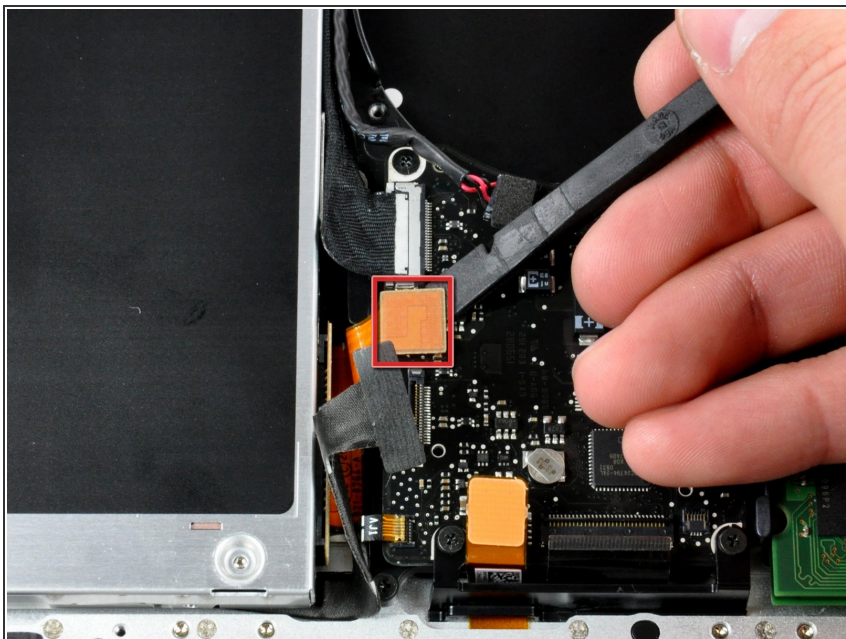
- Use the flat end of a spudger to pry the optical drive cable connector straight up off the logic board.
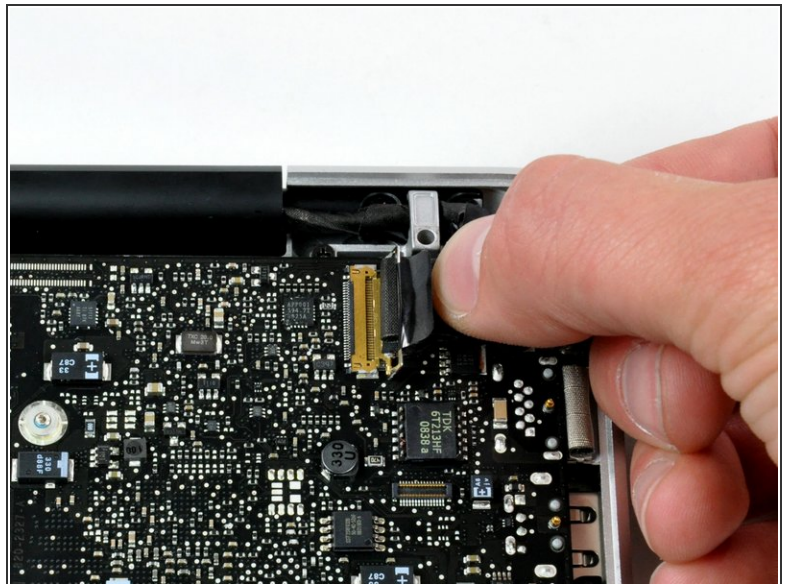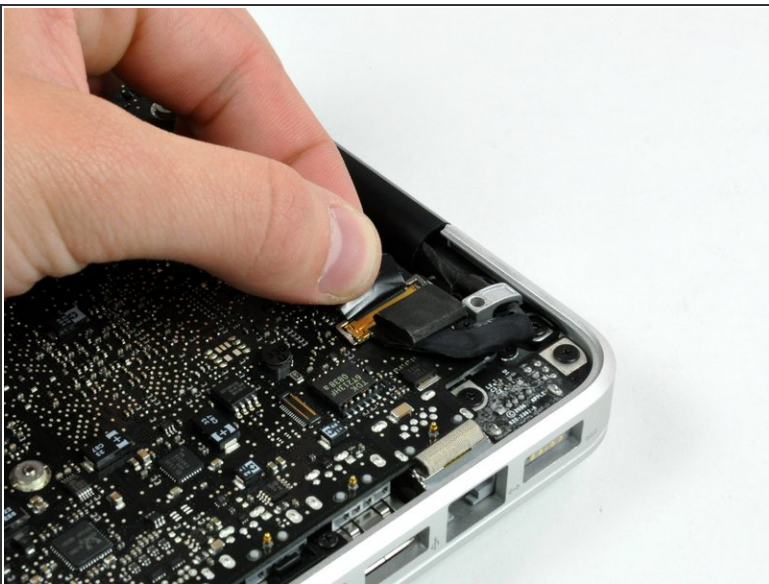
Step 20

- Disconnect the display data cable by pulling the male end straight away from its socket.
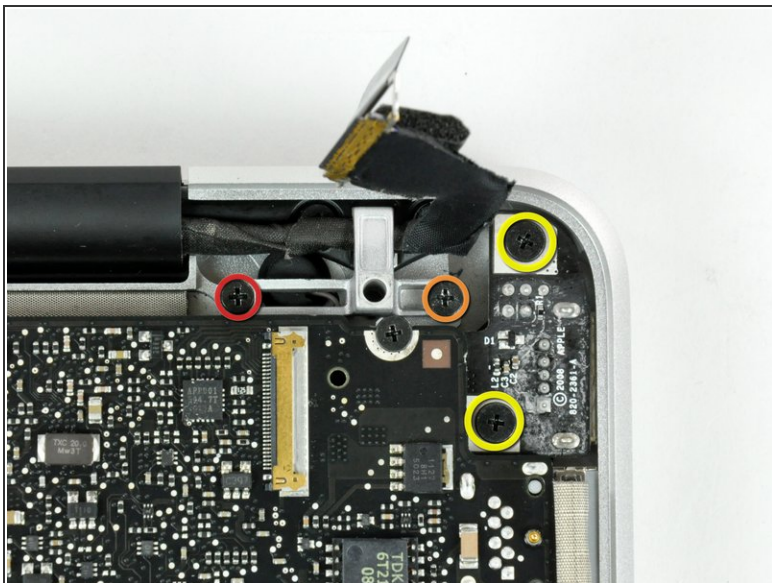
Step 21

- Use the flat end of a spudger to pry the subwoofer cable connector straight up off the logic board.
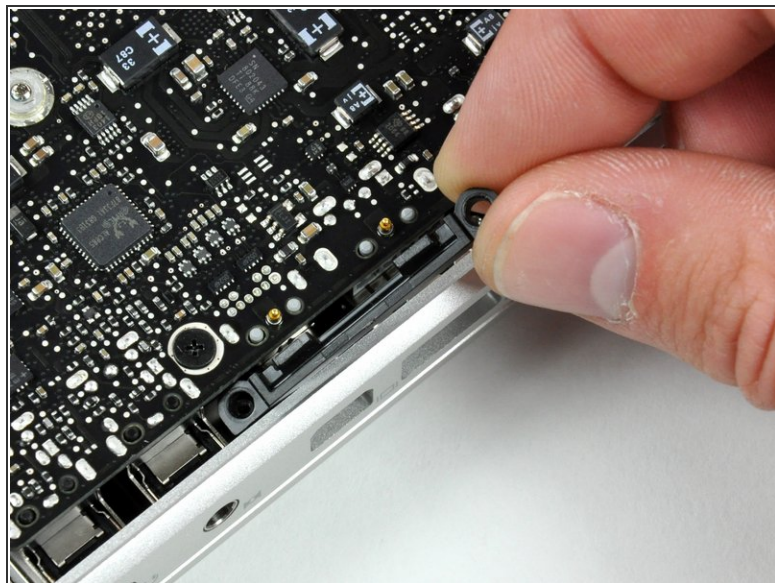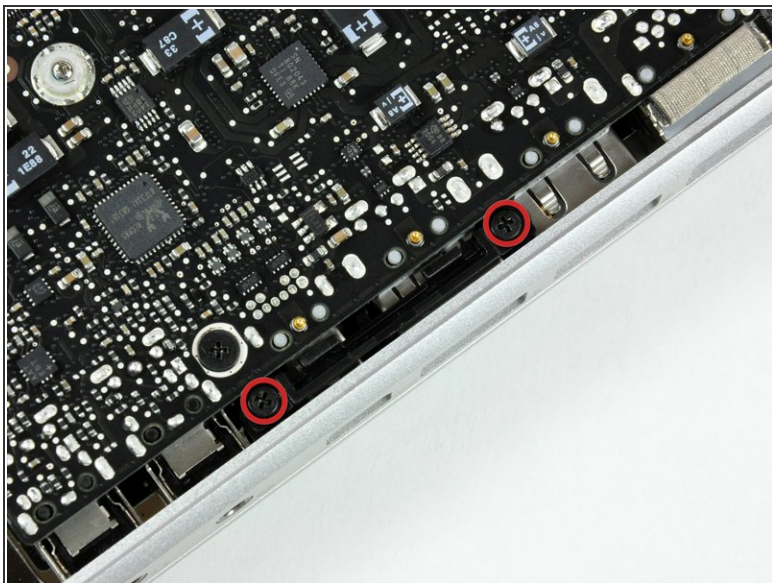
Step 22

- 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.

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Step 23
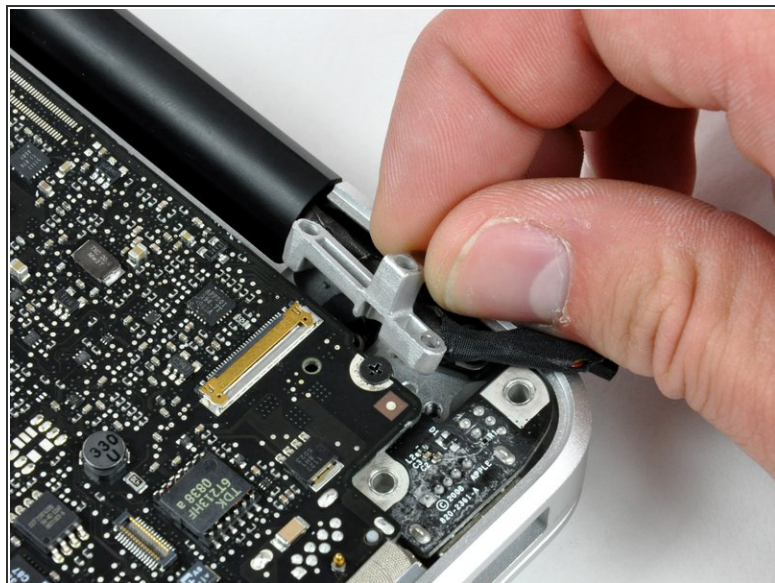
- Remove the following two screws securing the display data cable bracket to the upper case:
  - One 7mm Phillips screw.
  - One 5mm Phillips screw.
- Remove the two 7 mm Phillips screws from the DC-in board.
- Lift the display data cable bracket out of the upper case.

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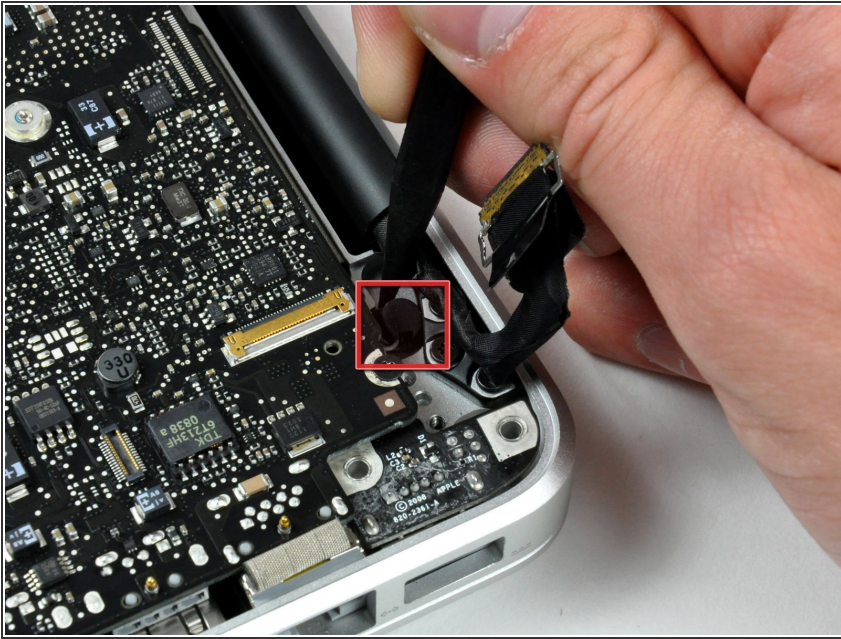
Step 24

- If present, remove the two 4mm Phillips screws securing the bottom case clip to the upper case.

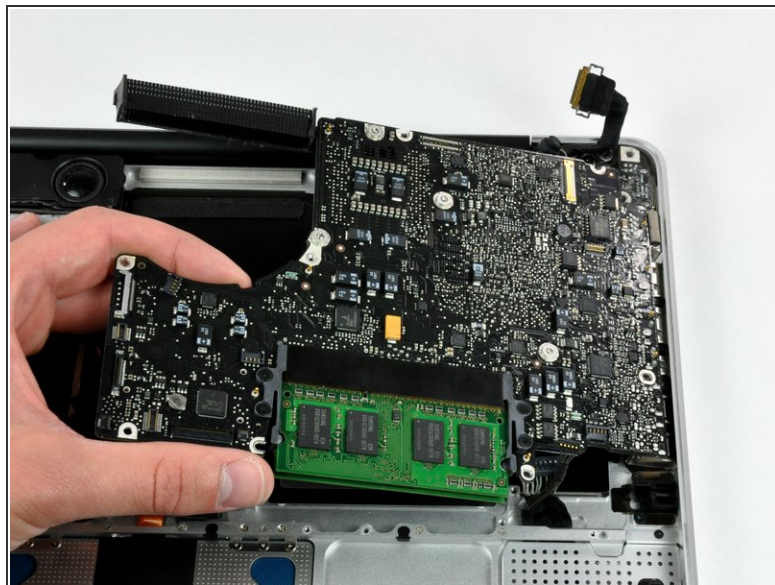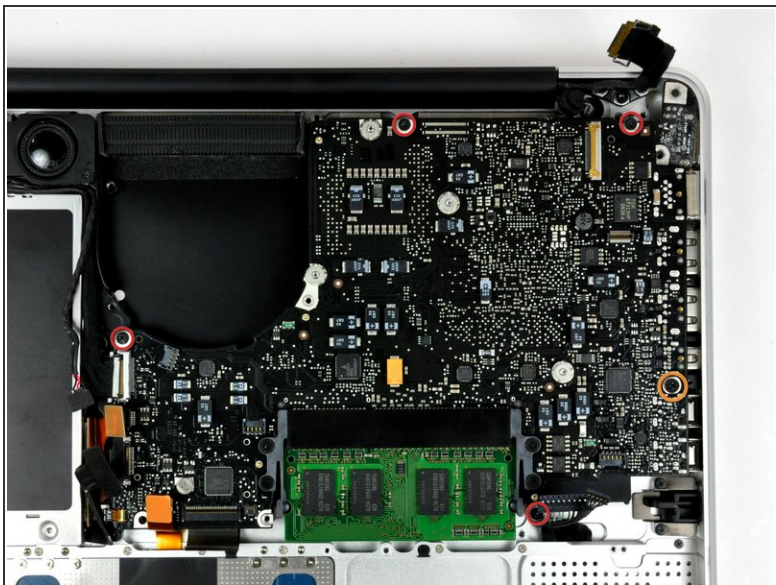- Lift the bottom case clip out of the upper case.

Step 25
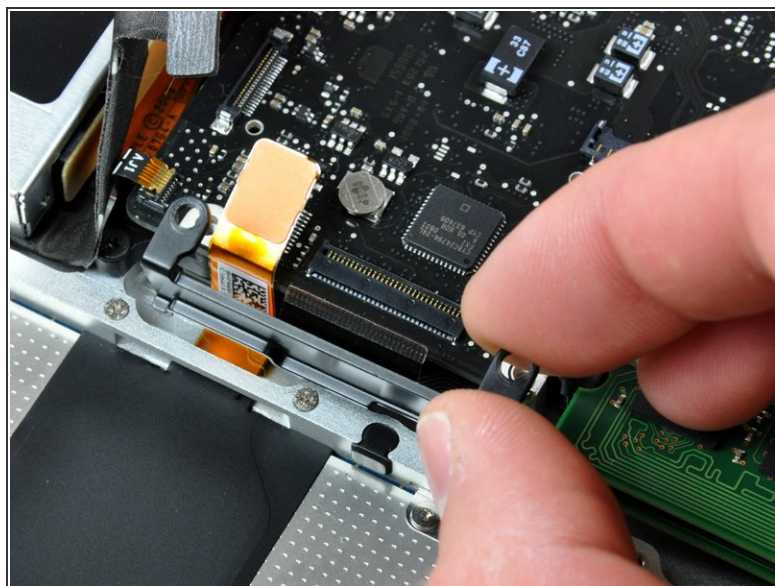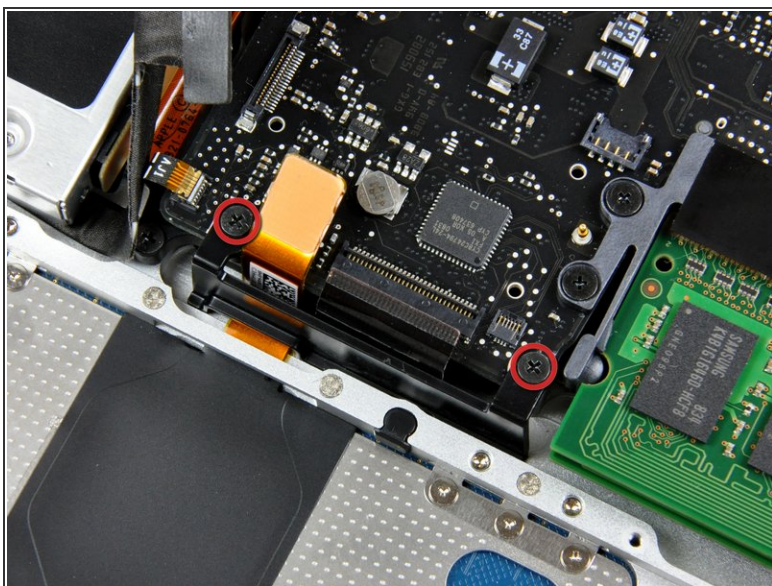
- Remove the two 5mm Phillips screws securing the keyboard flex bracket to the upper case.

- Lift the keyboard flex bracket out of the upper case.

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Step 26

- Use the tip of a spudger to release the microphone from the upper case.

Step 27

- Remove the following five screws securing the logic board to the upper case:

  - Four 3mm Phillips screws.

  - One 3.5mm Phillips screw.

- Lift the logic board from its left edge and pull it out of the upper case.
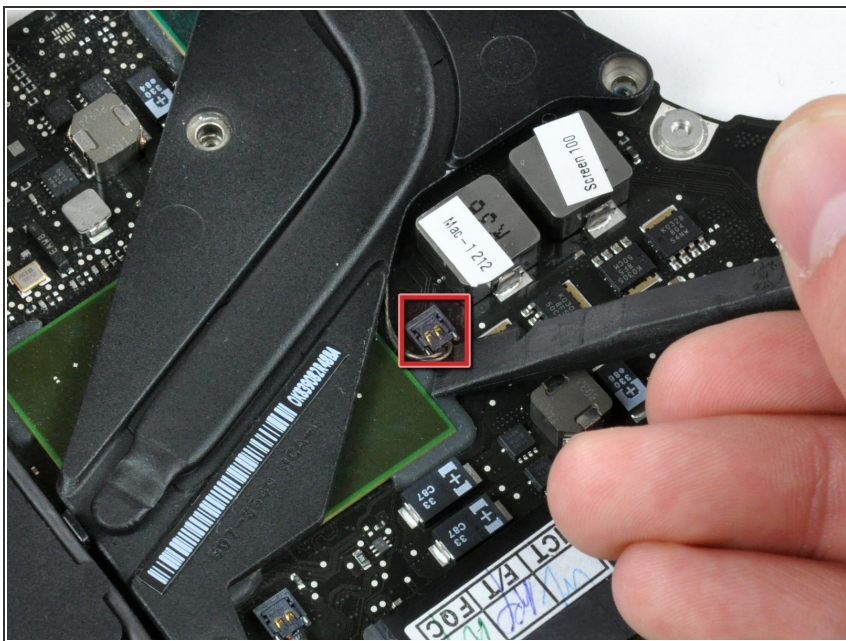
Step 28 — Heat Sink

- Remove the four 8.5 mm Phillips screws securing the heat sink to the logic board.

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

Step 29

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

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Step 30

- Gently lift the heat sink off the logic board.

- (i) 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.
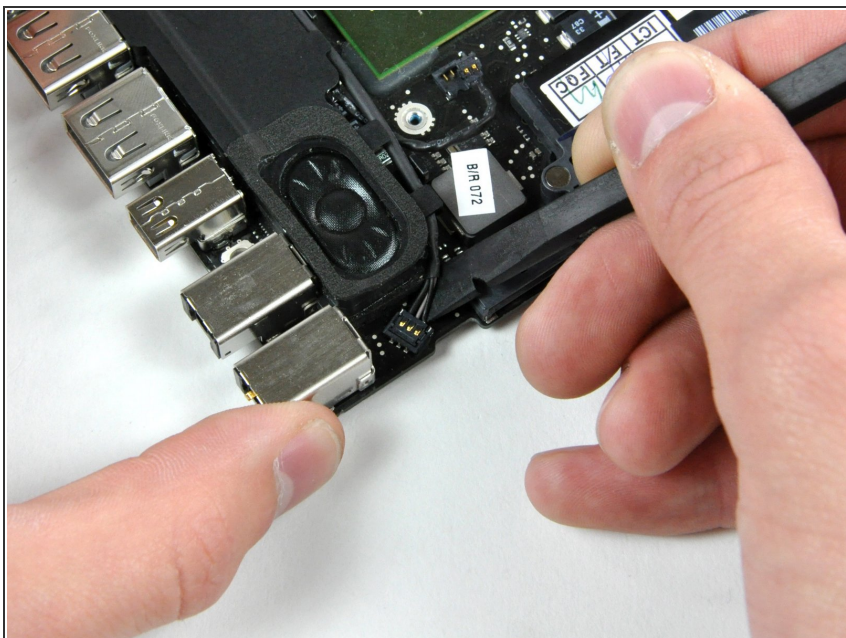
Step 31 — Logic Board
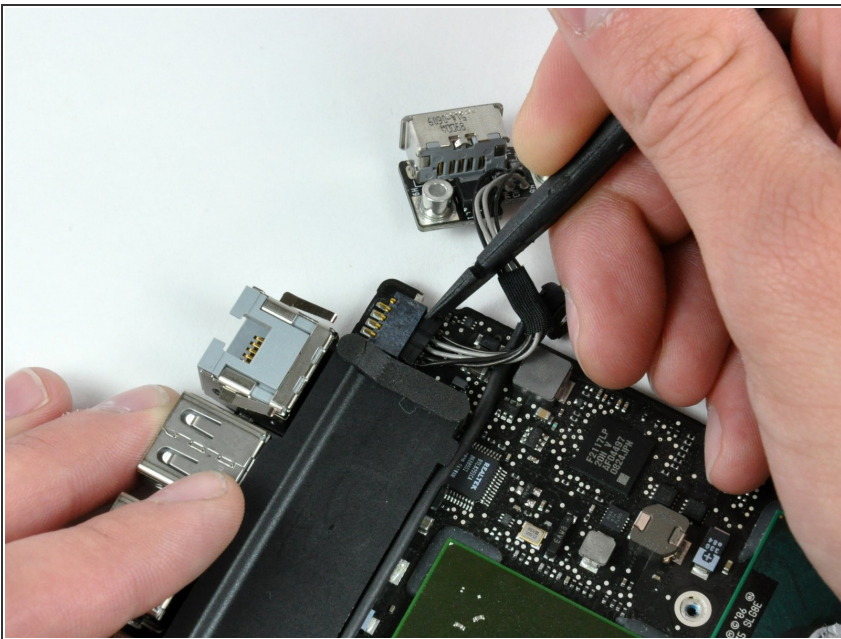
- Disconnect the DC-In Board from the logic board by pulling its connector straight away from the socket on the logic board.

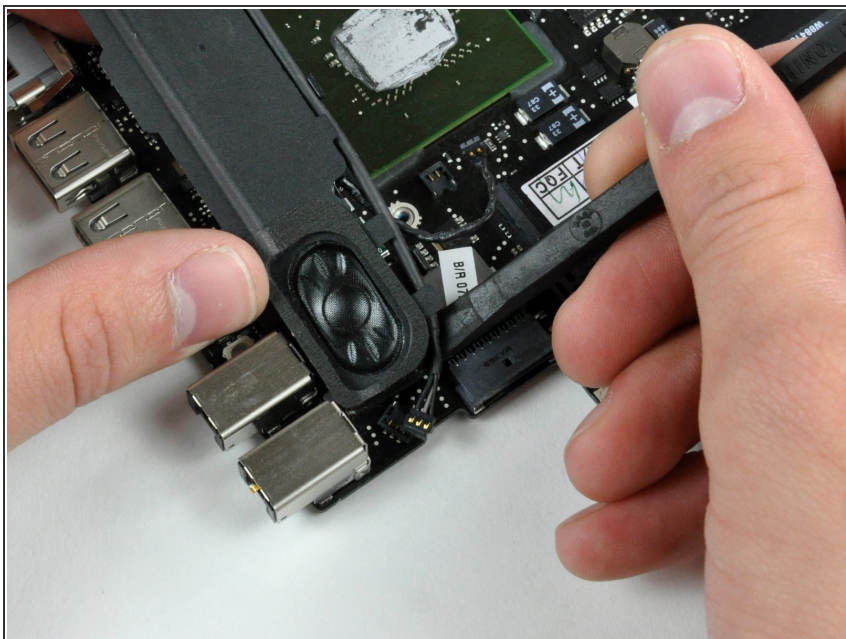This document was generated on 2020-11-15 10:31:38 PM (MST).

Step 32

- Use the flat end of a spudger to pry the left speaker connector up off the logic board.
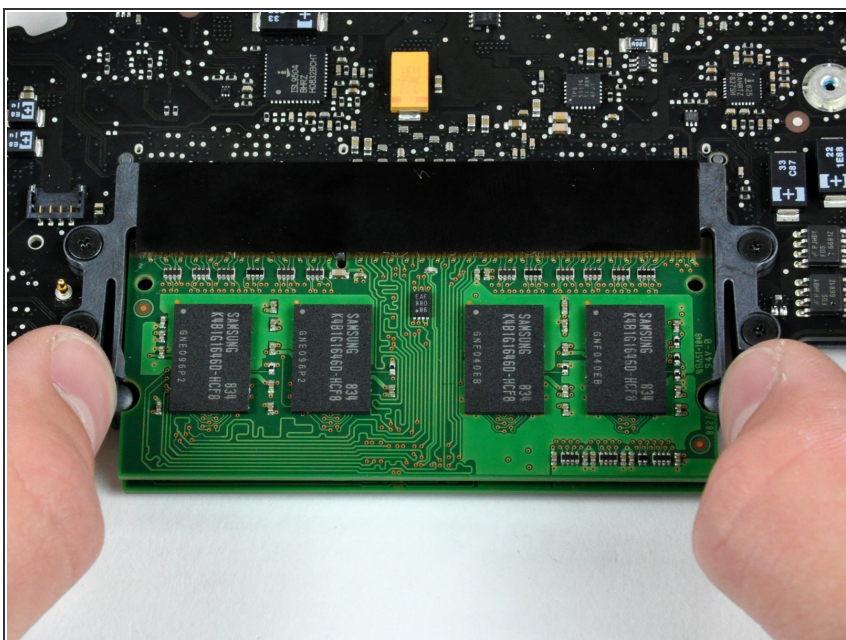
Step 33

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

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Step 34

● Use the flat end of a spudger to separate the adhesive securing the left speaker assembly to the logic board.

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.

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Step 36
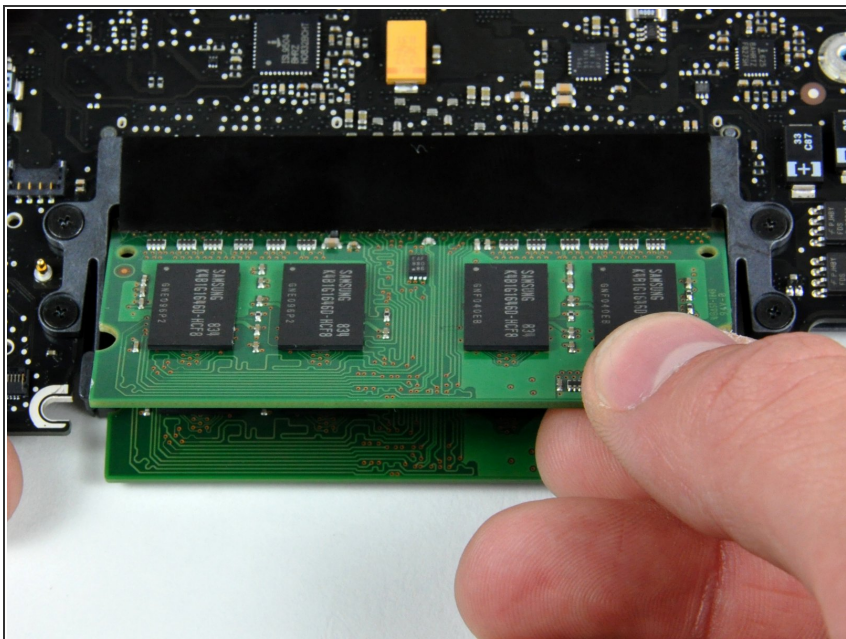
- After the RAM chip has popped up, pull it straight out of its socket.

- (i) 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.