iMac G5 20" Model A1145 Heat Sinks Replacement

Use this guide to transfer the heat sinks to...

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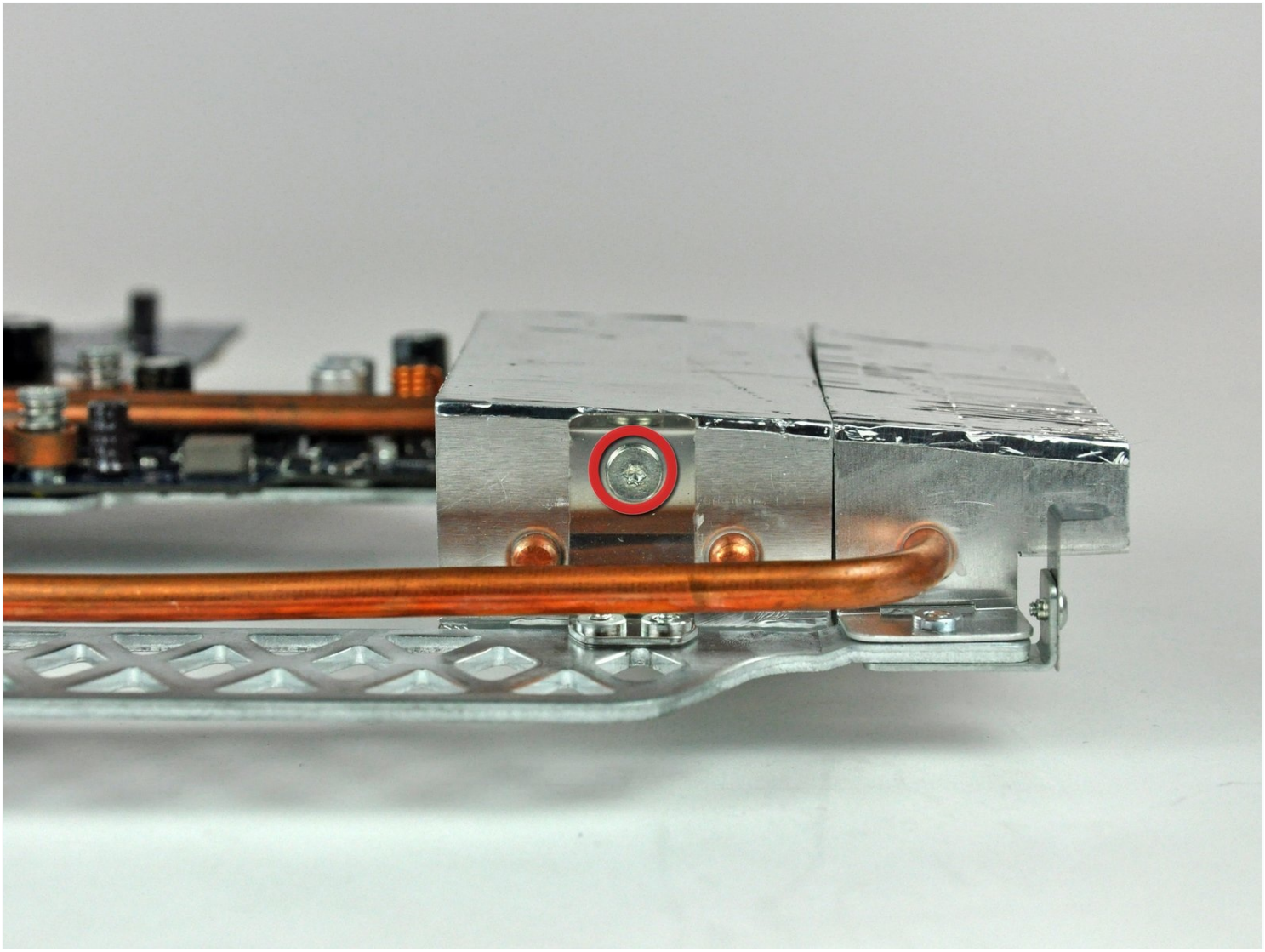


INTRODUCTION

Use this guide to transfer the heat sinks to your new logic board.

TOOLS:

Arctic Silver ArctiClean (1)
Arctic Silver Thermal Paste (1)
Metal Spudger (1)
Phillips #1 Screwdriver (1)
Phillips #00 Screwdriver (1)
Plastic Cards (1)
Spudger (1)
TR10 Torx Security Screwdriver (1)
T6 Torx Screwdriver (1)
TR8 Torx Security Screwdriver (1)

Step 1 — Access Door

- Orient the iMac face-side down on a table with the bottom edge facing yourself.
- Remove the two Phillips screws securing the access door to the bottom grille of your iMac.

The screws are captive in the access door.

Before beginning the repair, unplug the computer and press and hold the power switch for 20-30 seconds, to discharge internal capacitors.

Step 2

- Remove the access door.

Step 3 — Front Bezel

- Remove the three T8 Torx screws securing the front bezel to the rear case along the lower edge of the iMac.

Step 4

- Turn the computer over.
- Use your thumbs to press both RAM arms in past the front bezel for enough clearance to lift it off the rear case.

Step 5

- While holding the RAM arms in with your thumbs, lift the lower edge of the front bezel enough to clear the rear case.

Step 6



ⓘ Re-orient your iMac so it sits upright on the stand.

- Insert a plastic card up into the corner of the air vent slot near the top of the rear case.
- Push the card toward the top of the iMac to release the front bezel latch.
- Pull the front bezel away from the rear case.
- Repeat this process for the other side of the front bezel.

ⓘ It may be necessary to apply several layers of duct tape to the top of the access card to aid in releasing the latches.

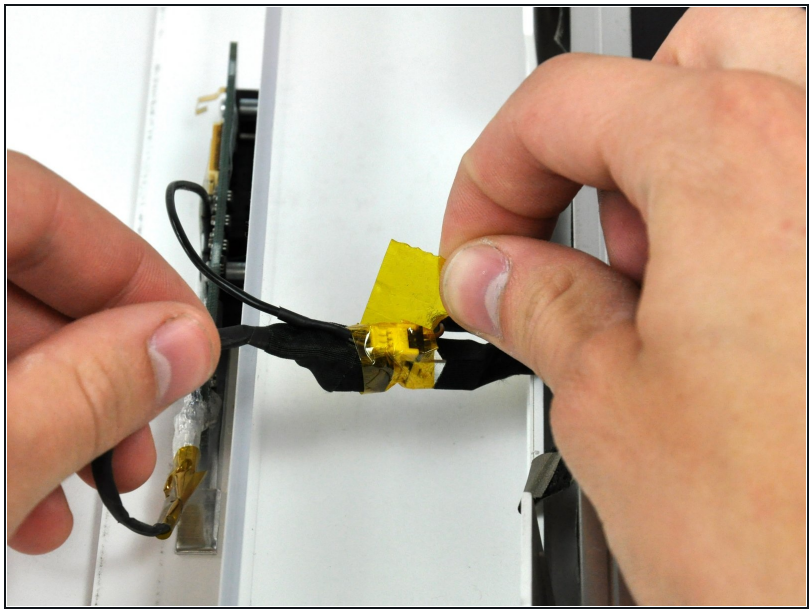
- If the bezel refuses to release, try pressing the lower edge back onto the rear case and repeat this opening process.

ⓘ Alternatively, you can use a strong magnet by holding it to the front top left/right corner of the display. You will hear a snapping sound when the hatch is released.

Step 7

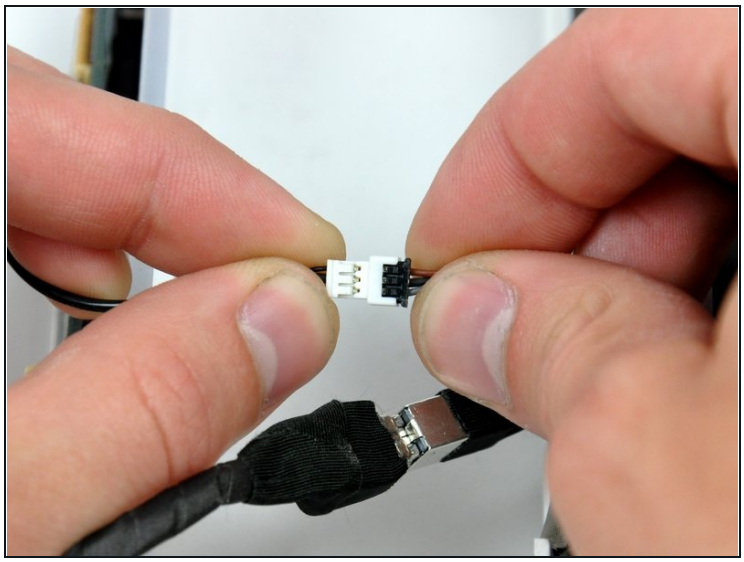
- Lay your iMac stand-side down on a table.
- Lift the front bezel from its lower edge and rotate it away from the rest of your iMac, minding the RAM arms that may get caught.
- Lay the front bezel above the rest of the iMac.

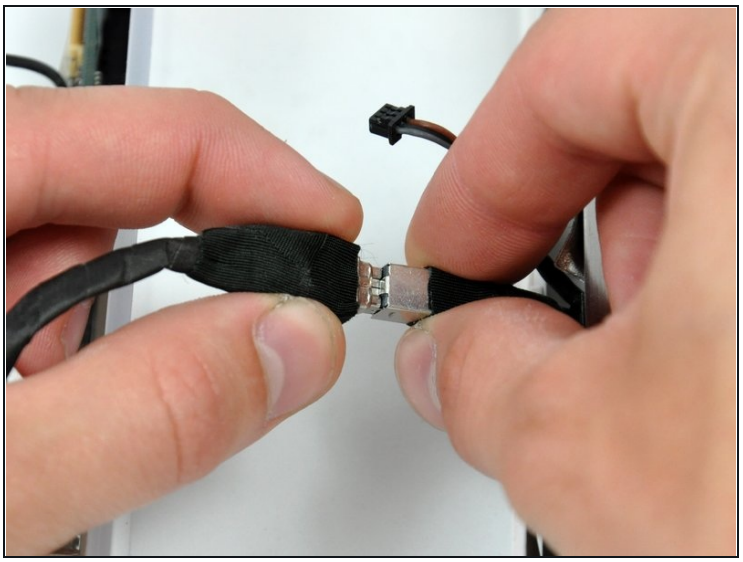
Step 8



- If necessary, remove the piece of kapton tape wrapped around the microphone and camera connectors.

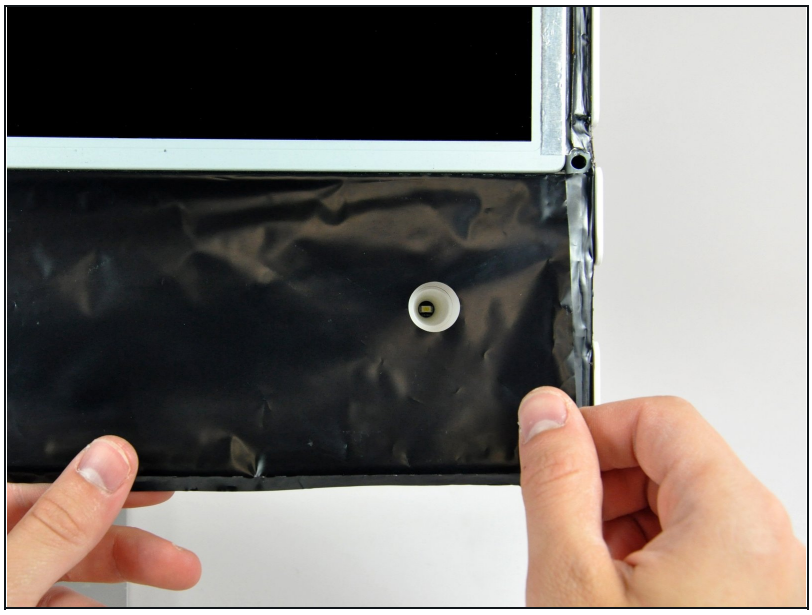
Step 9





- Disconnect both the camera and microphone cables.

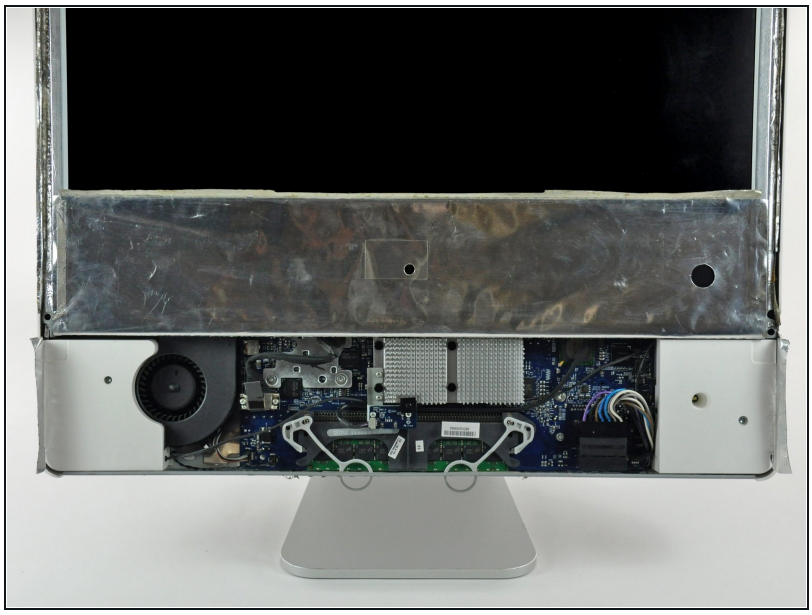
Step 10 — Lower EMI Shield



- Peel the lower EMI shield off the lower edge of the iMac and off the two vertical 4" sections on either side of the iMac.

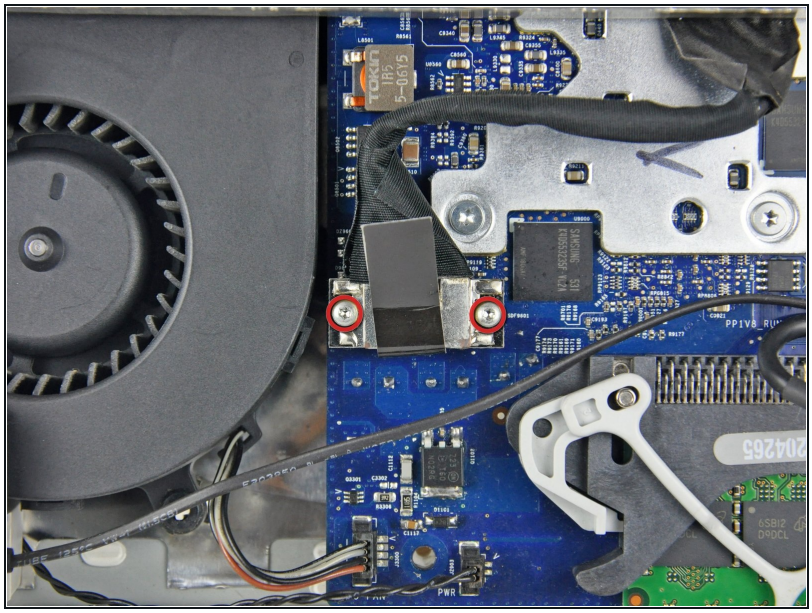
ⓘ It is not necessary to peel the lower EMI shield off the display.

Step 11



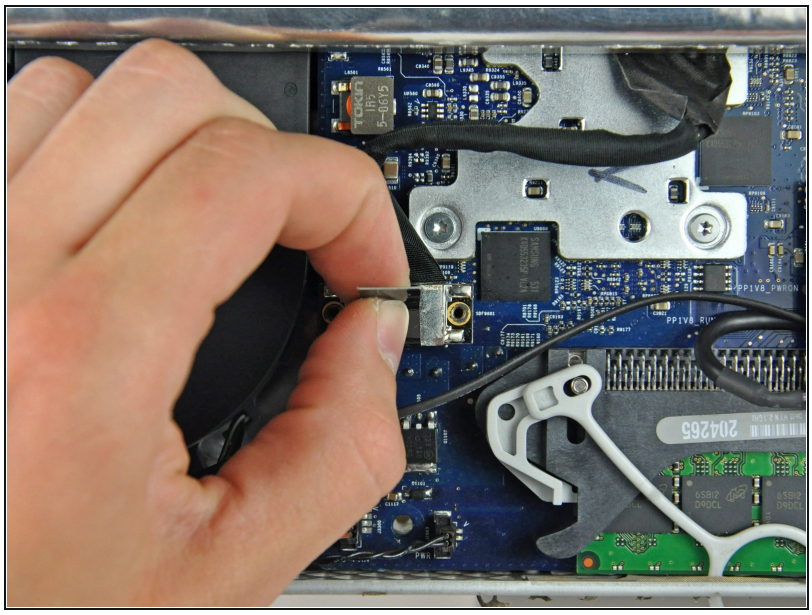
- Tape the lower EMI shield up against the face of the display to keep it out of the way while you work.

Step 12 — Display



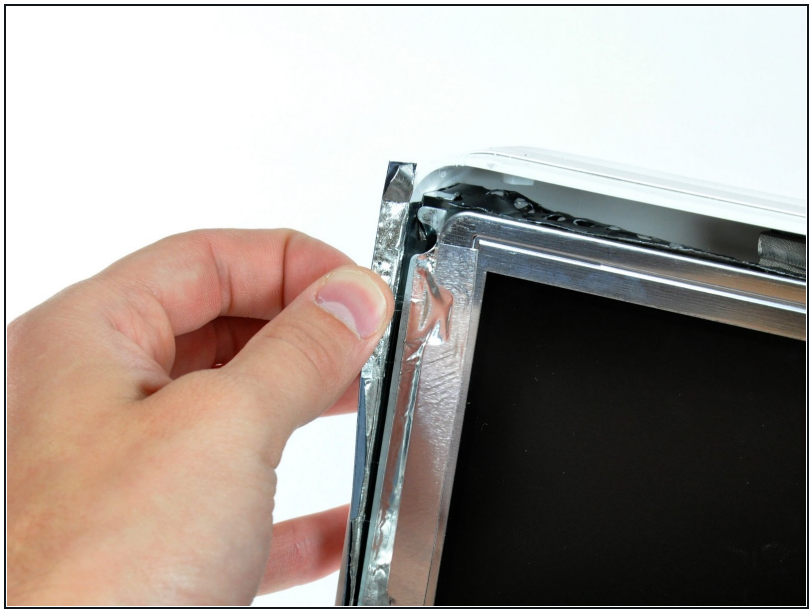
- Remove the two T6 Torx screws securing the display data cable connector to the logic board.

Step 13



- To disconnect the display data cable, grab its connector's black tab and pull it away from the face of the logic board.

Step 14



- Peel back the two EMI tape strips from the left and right edges of the display.

During reassembly, it is helpful to use several small strips of tape to hold the EMI shielding along the left and right edges of the display footprint out of the way before lowering the display into the rear case of your iMac.

Step 15

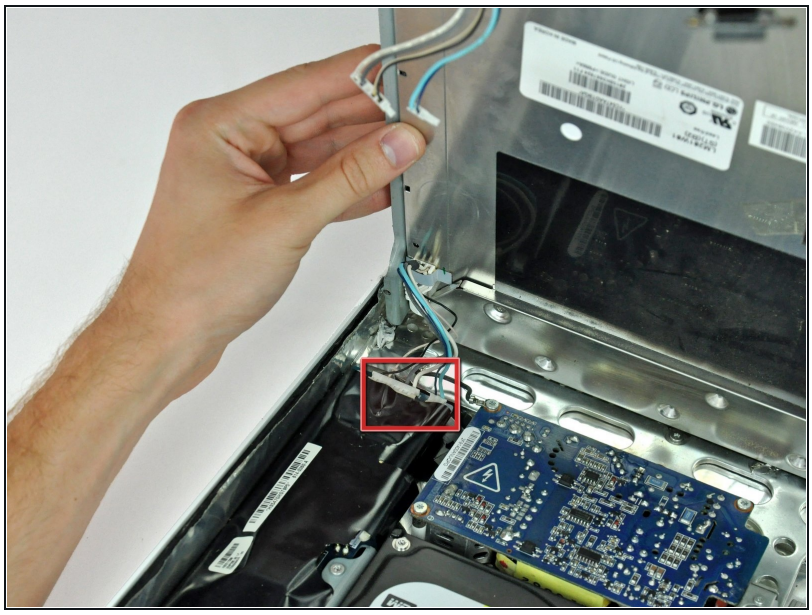
- Remove the four recessed T10 Torx screws securing the display to the rear case.

ⓘ Bit drivers tend to be too short to reach these screws. Be sure to have a magnetic thin-shafted T10 Torx screwdriver on hand.

Step 16

- Lift the lower edge of the display slightly out of the rear case.
- Disconnect both inverter cables (shown in red) by pulling their connectors toward the bottom edge of your iMac.

Step 17

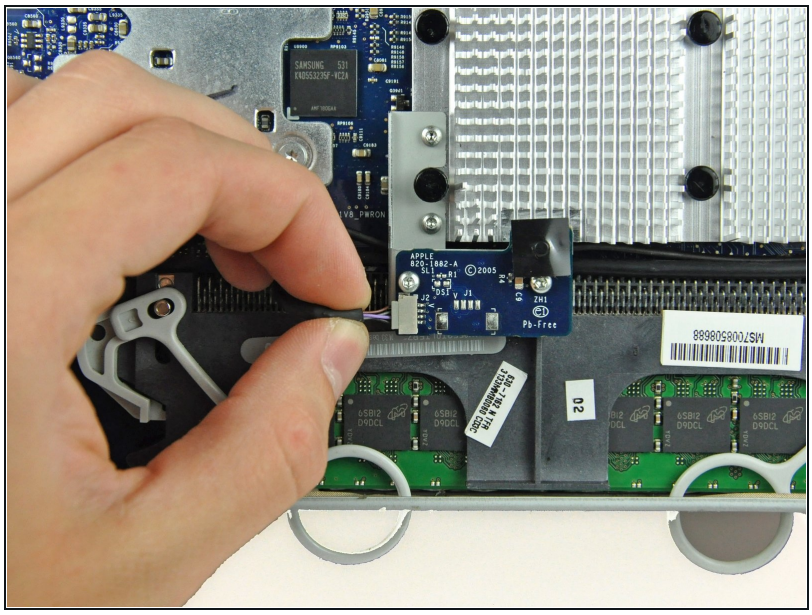


- Lift the display until it is nearly perpendicular to the rear case.
- Disconnect the remaining two inverter cables (shown in red) by pulling their connectors toward the top edge of your iMac.

Step 18

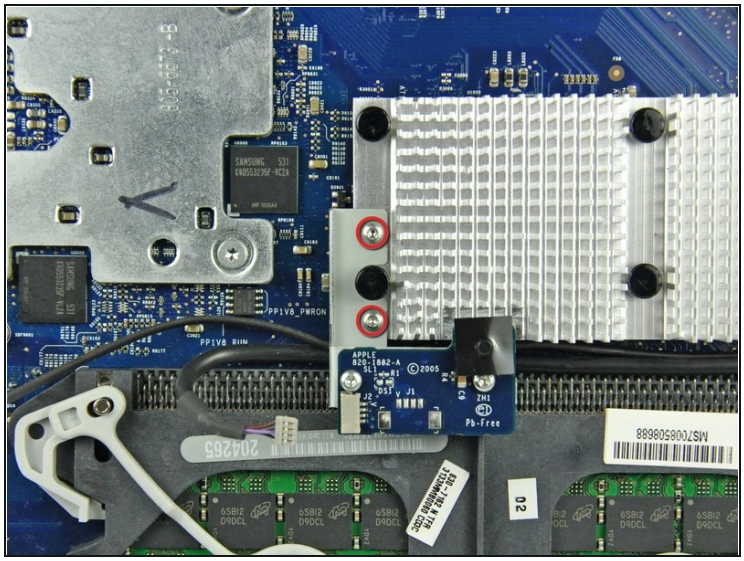
- While holding the display perpendicular to the rear case, pull it upward to peel off the EMI shield stuck to its upper edge.

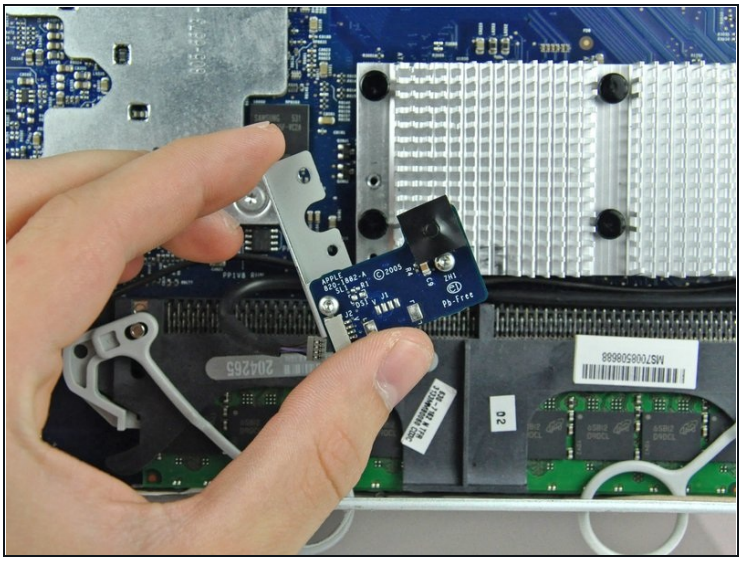
Step 19 — Logic board



- Disconnect the IR board cable by pulling its connector away from the socket on the IR board.

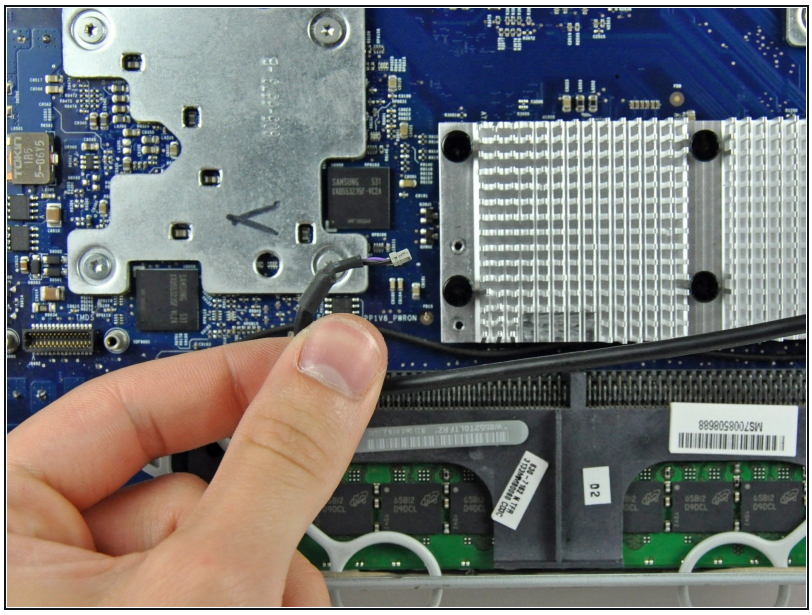
Step 20





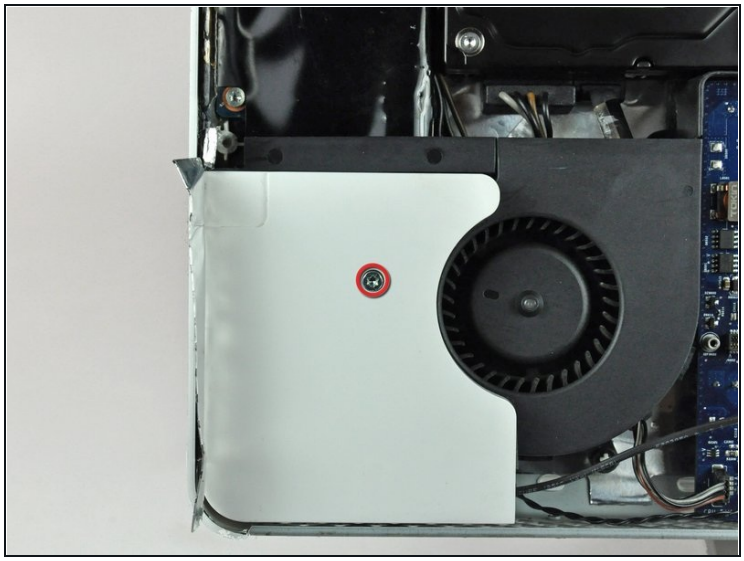
- Remove the two T6 Torx screws securing the IR board bracket to the IR board.

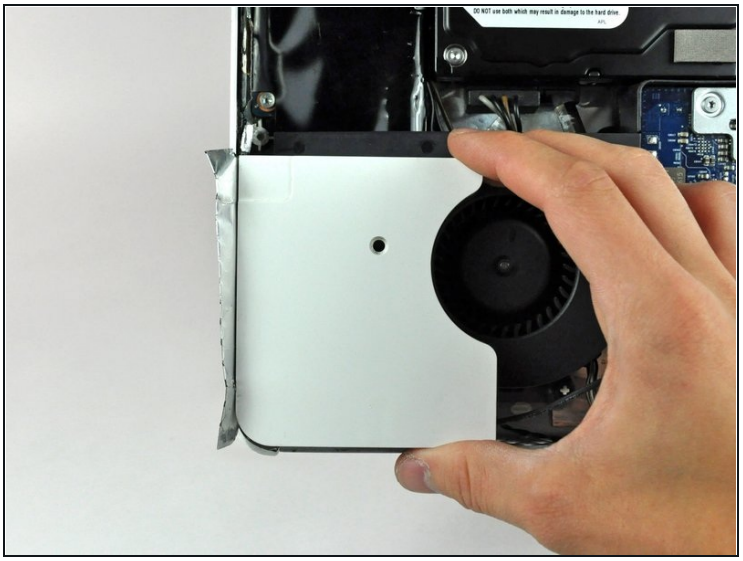
Step 21



- De-route the IR cable from under the aluminum heat sink and tuck it behind the optical drive to keep it out of the way.

Step 22



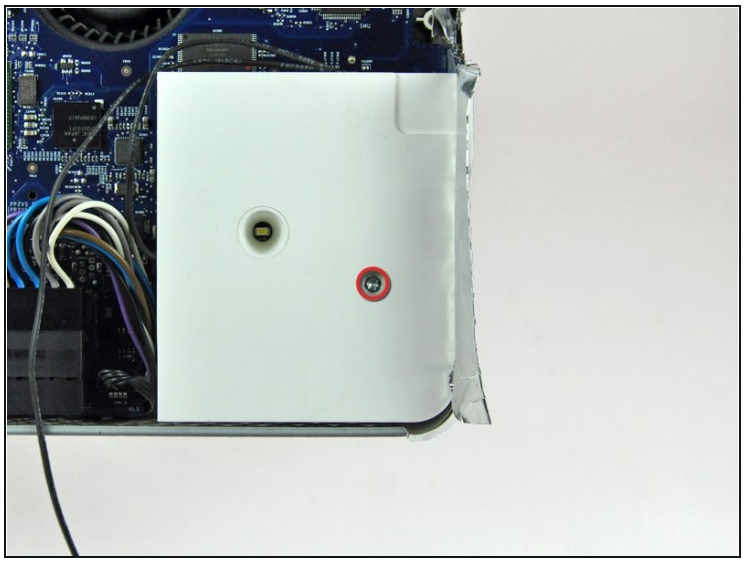


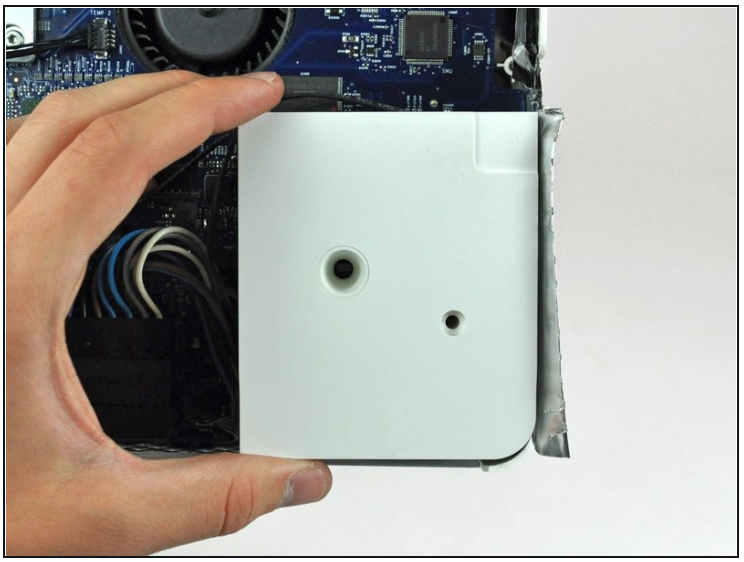
- Remove the single T10 Torx screw securing the left speaker to the rear case.

The screw for the left speaker has coarse threads.

- Lift the left speaker out of the rear case and de-route its cable across the logic board.

Step 23



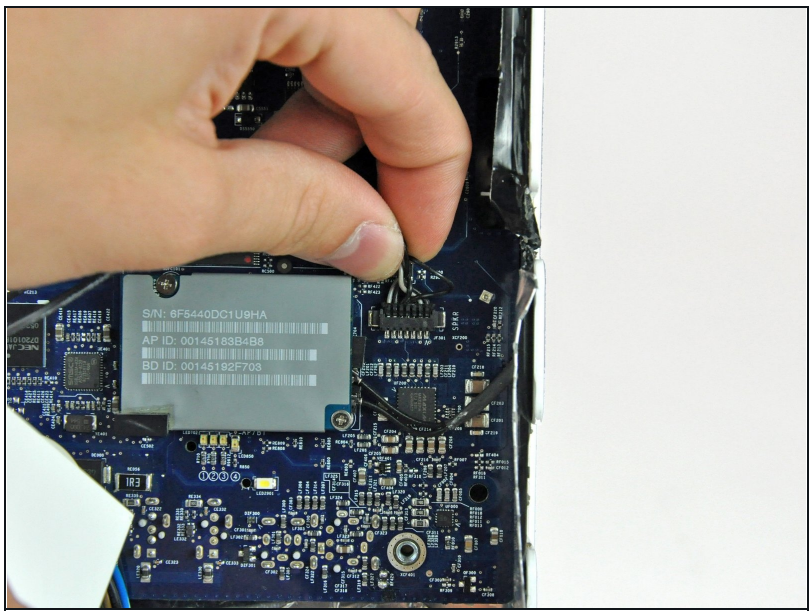


- Remove the single T10 Torx screw securing the right speaker to the rear case.

The right speaker screw has fine threads.

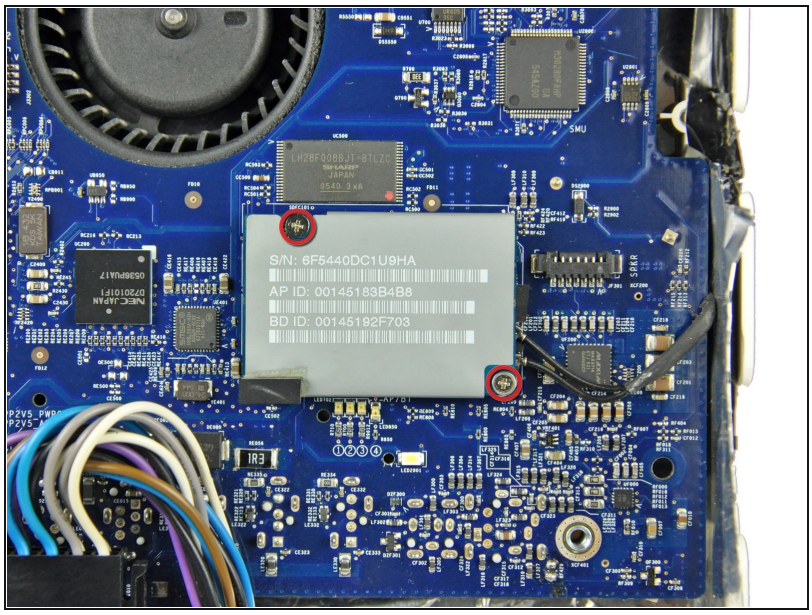
- Lift the right speaker out of the rear case, minding the short cable between the speaker and its connector (located slightly above the right speaker).

Step 24



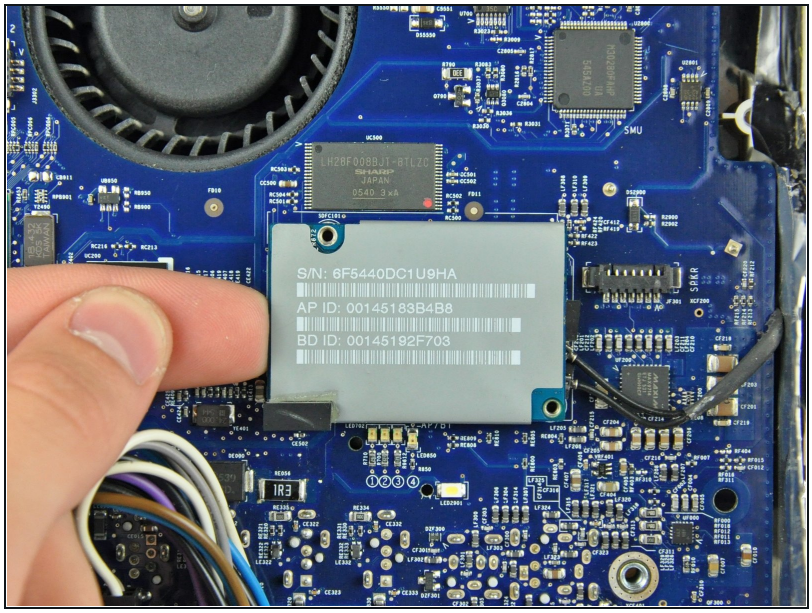
- Disconnect the speakers from the logic board by pulling their connector toward the top edge of the iMac.

Step 25



- Remove the two Phillips or two T6 Torx screws securing the AirPort/Bluetooth board to the logic board.

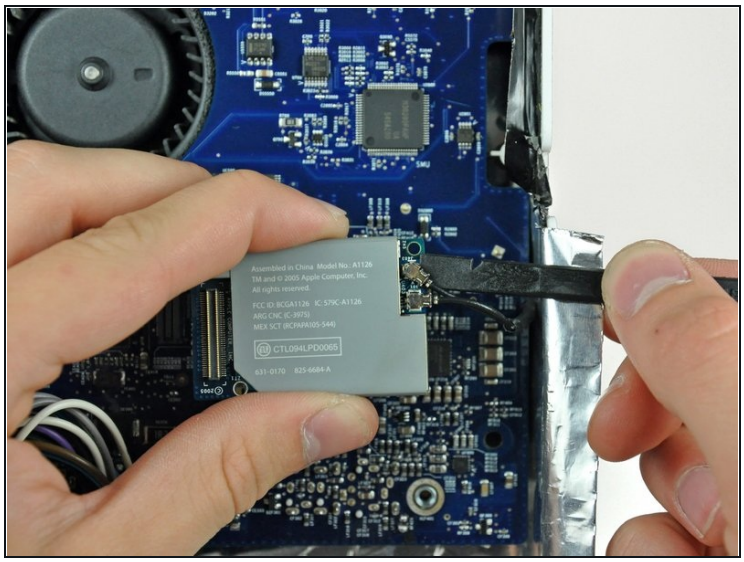
Step 26



- Use your finger to lift the AirPort/Bluetooth board from its left edge, disconnecting it from the logic board.

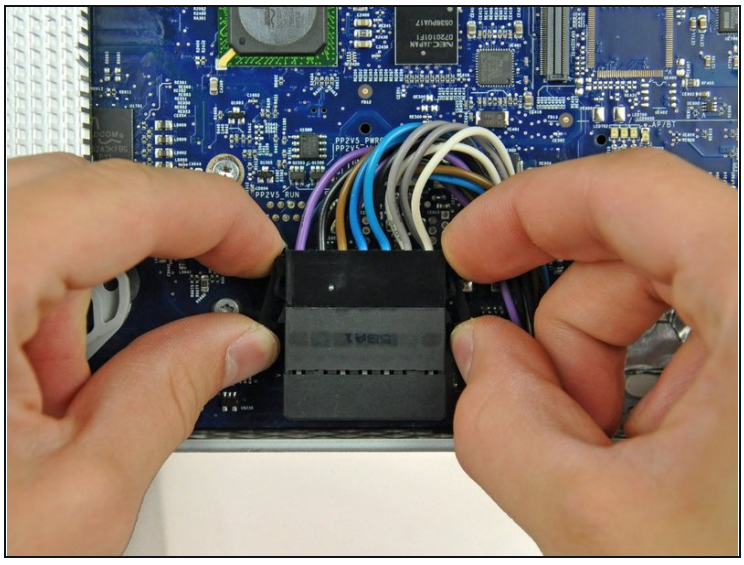
⚠ Lift the board from its left edge **only**.

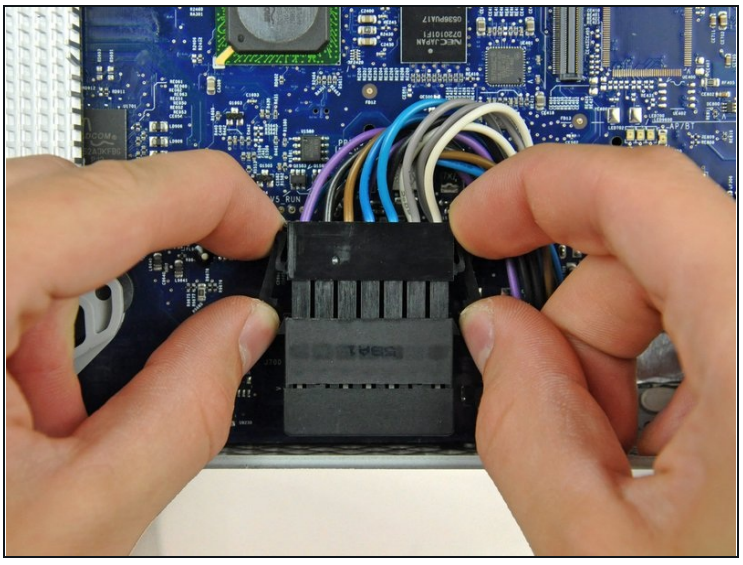
Step 27



- Use the flat end of a spudger to pry both antenna cable connectors up off the AirPort/Bluetooth board.

Step 28

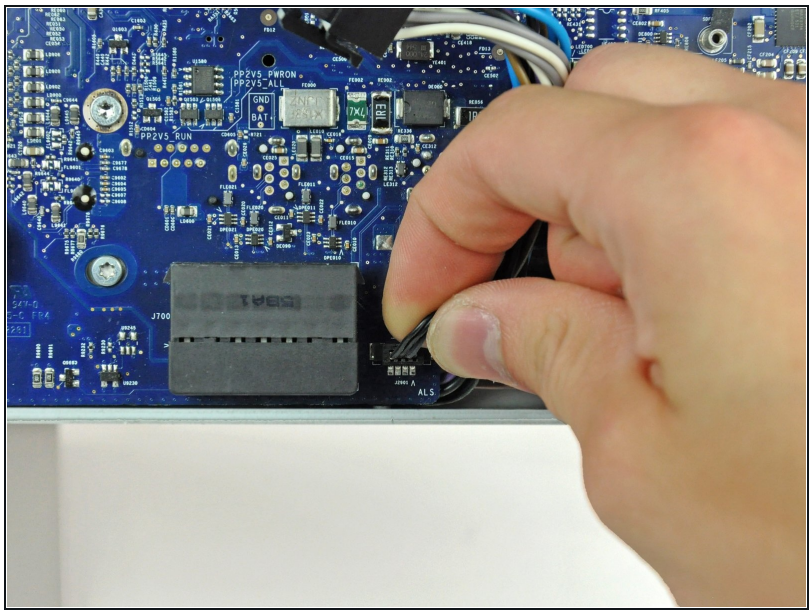




- Disconnect the DC-in cable by simultaneously depressing both locking arms and pulling its connector away from the socket on the logic board toward the top of your iMac.

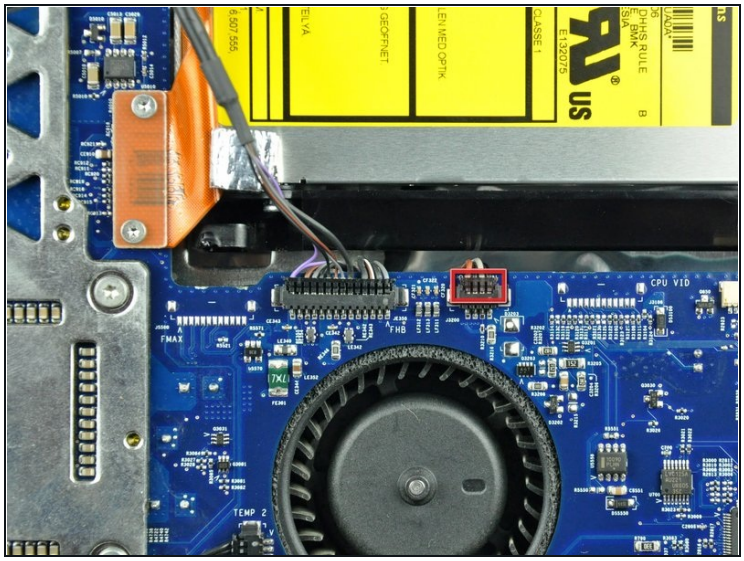
ⓘ After both locking arms pass their retaining tabs, it is helpful to push the arms toward the top edge of your iMac while wiggling the connector.

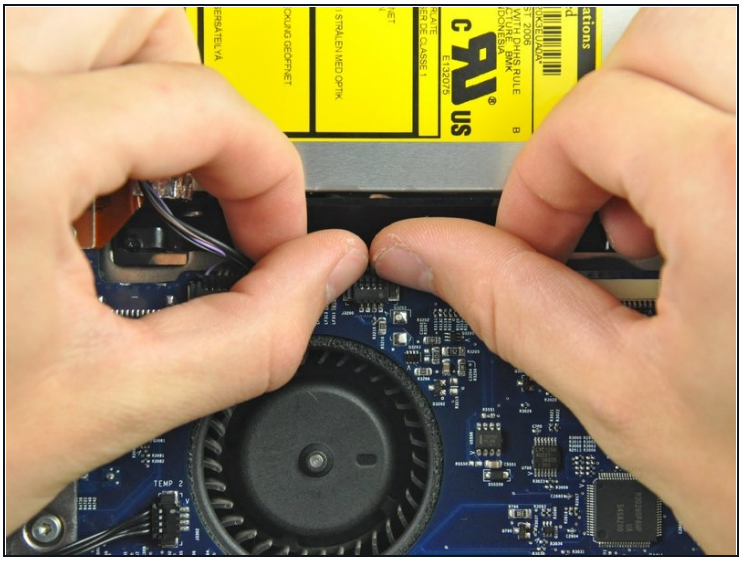
Step 29



- Disconnect the ambient light sensor by pulling its connector away from the face of the logic board.

Step 30

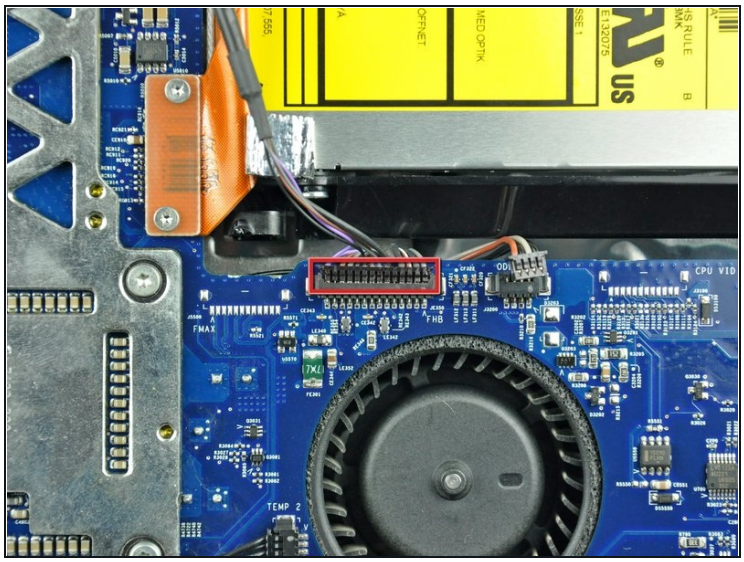


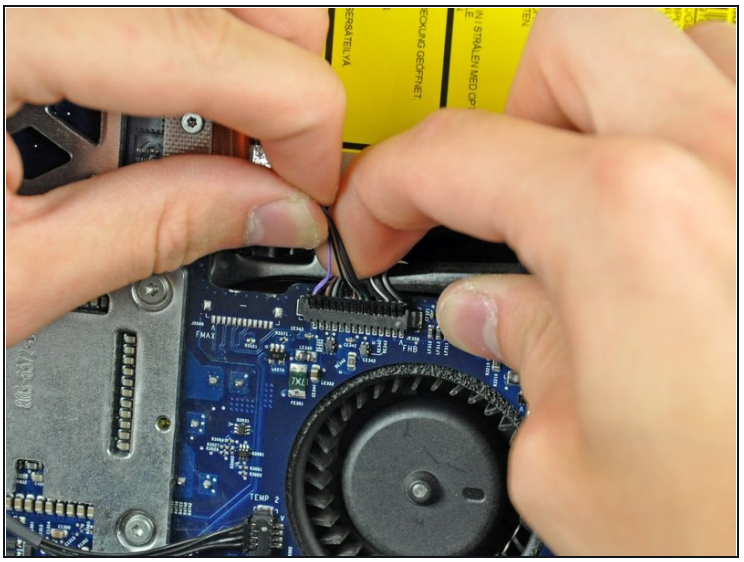


- Disconnect the optical drive fan from the logic board.

ⓘ To aid in removal, it is helpful to use both of your thumbnails to push the ears on either side of the connector toward the top edge of the iMac.

Step 31



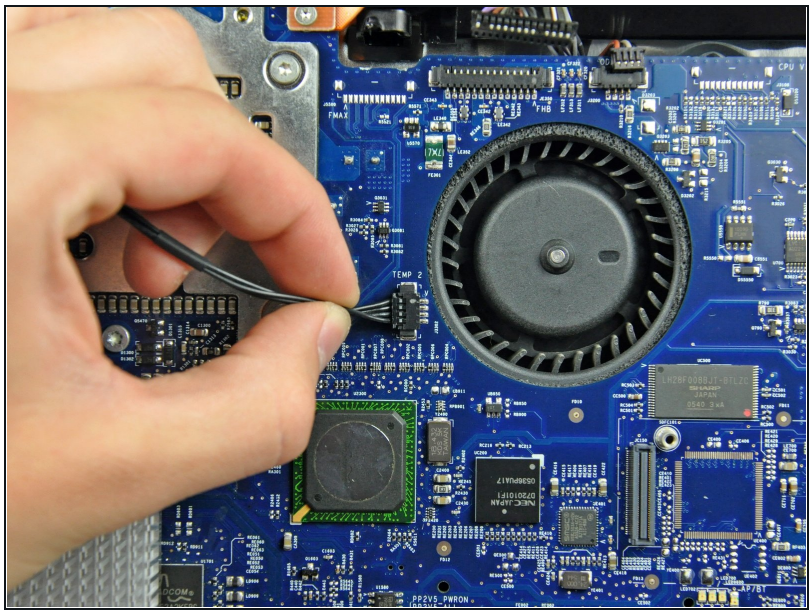


- Disconnect the IR/camera cable from the logic board.

⚠ This connector is especially wide and prone to breakage.

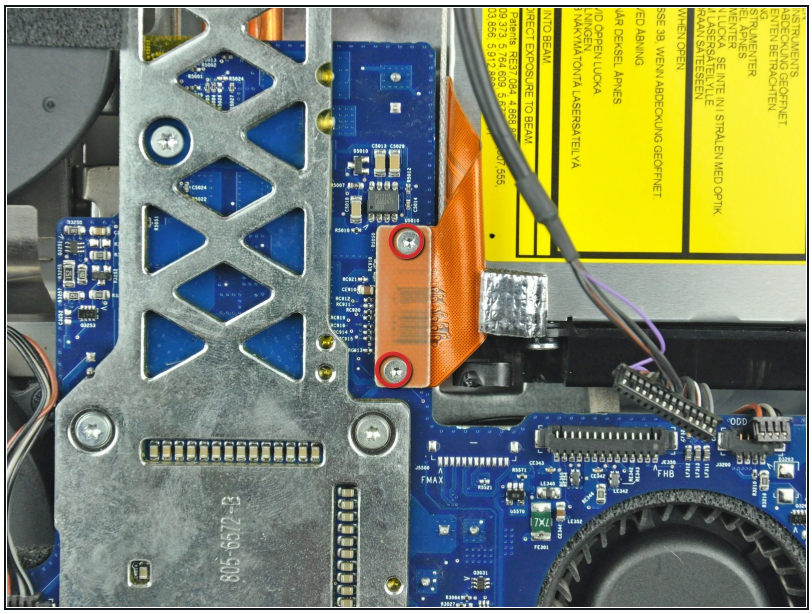
ⓘ To aid in removal, it is helpful to use one hand to pinch the cables against a spudger and pull up toward the top edge of the iMac while pulling up gently on the cables with your other hand.

Step 32



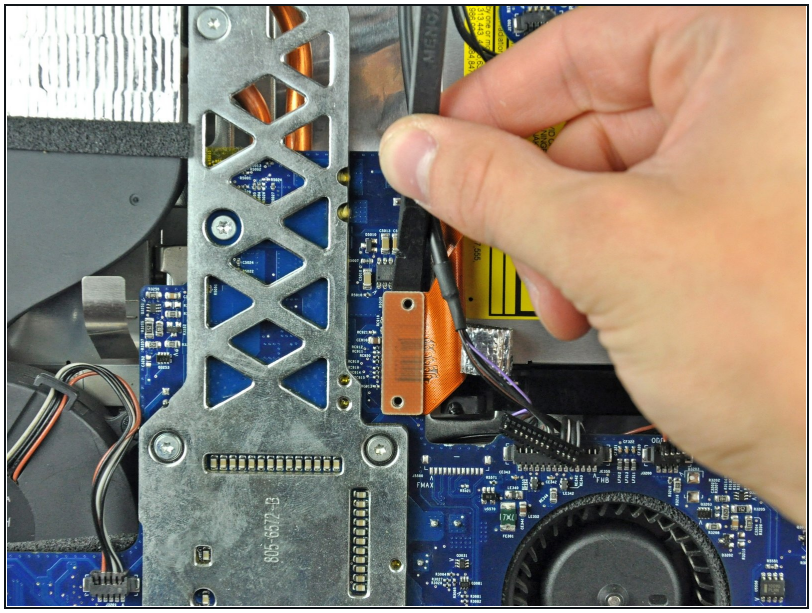
- Disconnect the optical drive thermal sensor cable from the logic board by pulling its connector toward the left edge of the iMac.

Step 33



- Remove the two T6 Torx screws securing the optical drive connector to the logic board.

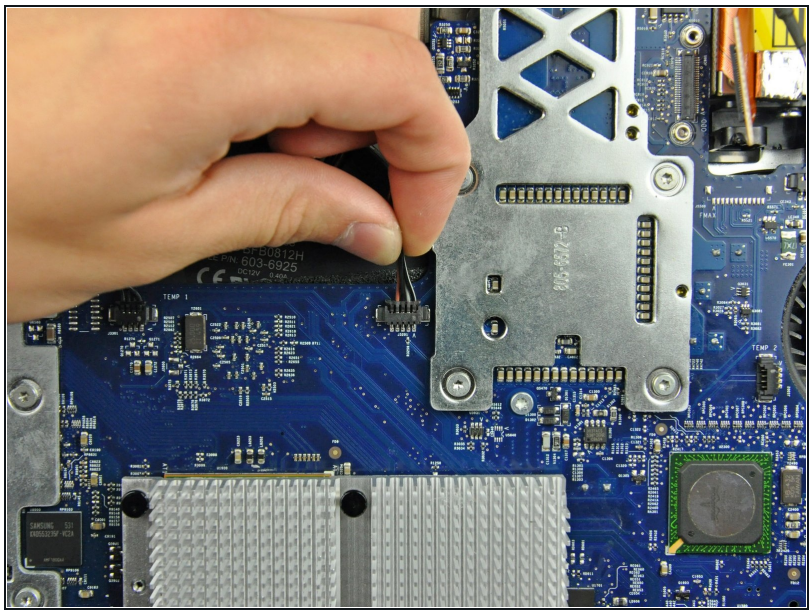
Step 34



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

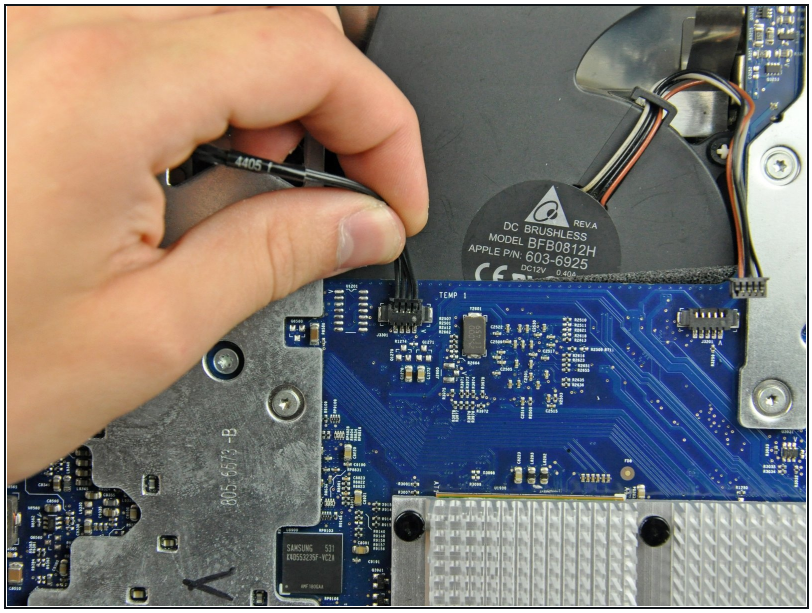
ⓘ It is helpful to insert the spudger under the top or bottom edge of the connector and twist to separate the connector from the logic board.

Step 35



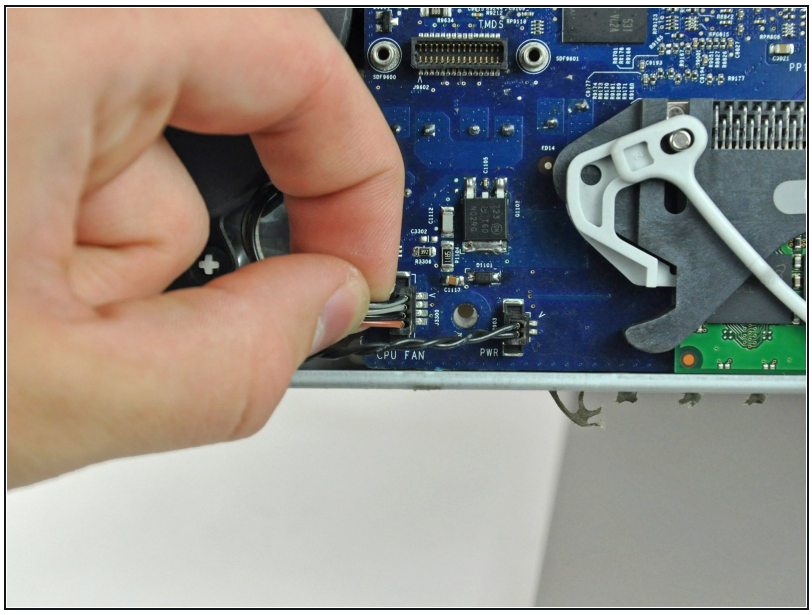
- Disconnect the CPU fan from the logic board by pulling its connector toward the top edge of the iMac.

Step 36



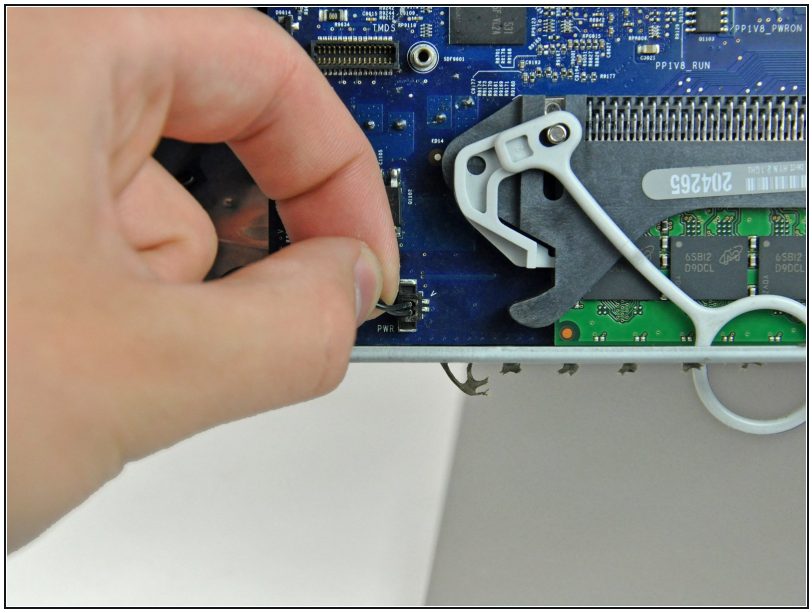
- Disconnect the hard drive thermal sensor from the logic board by pulling its connector toward the top edge of the iMac.

Step 37



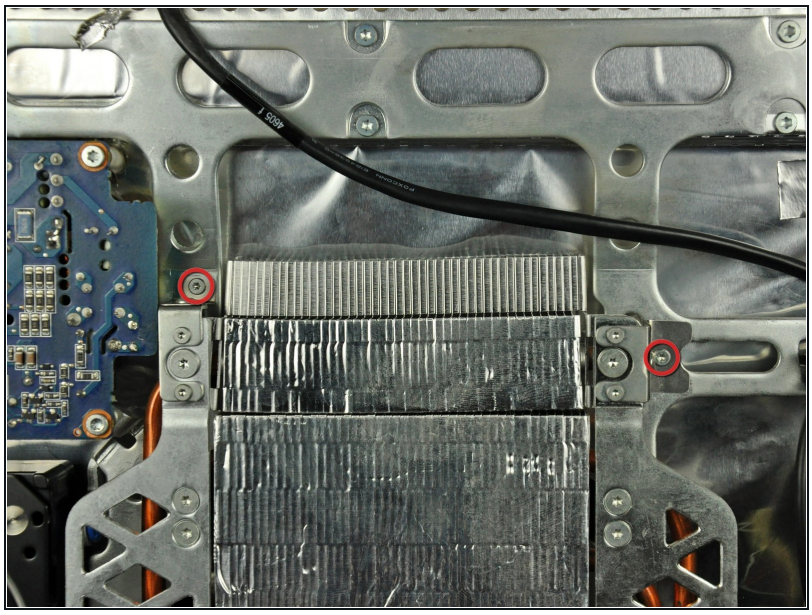
- Disconnect the hard drive fan by pulling its connector away from the face of the logic board.

Step 38



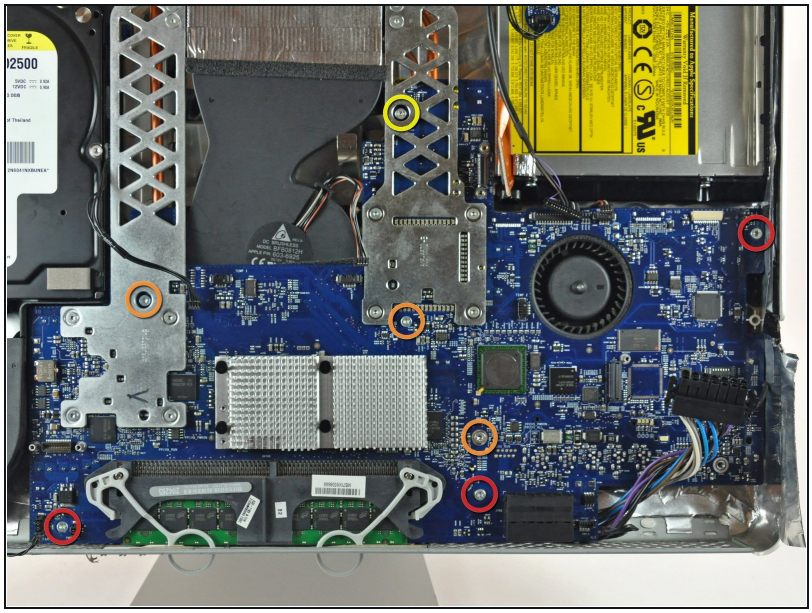
- Disconnect the power button cable by pulling its connector away from the face of the logic board.

Step 39



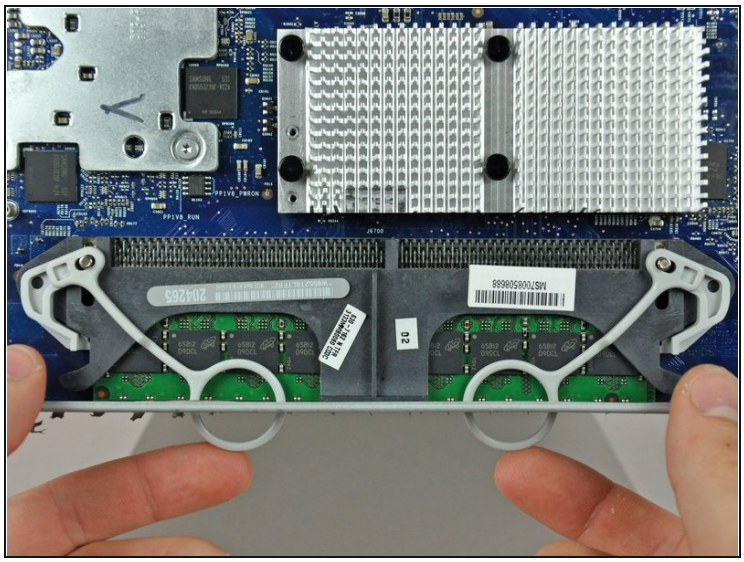
- Remove the two T6 Torx screws near the top of the heat sinks.

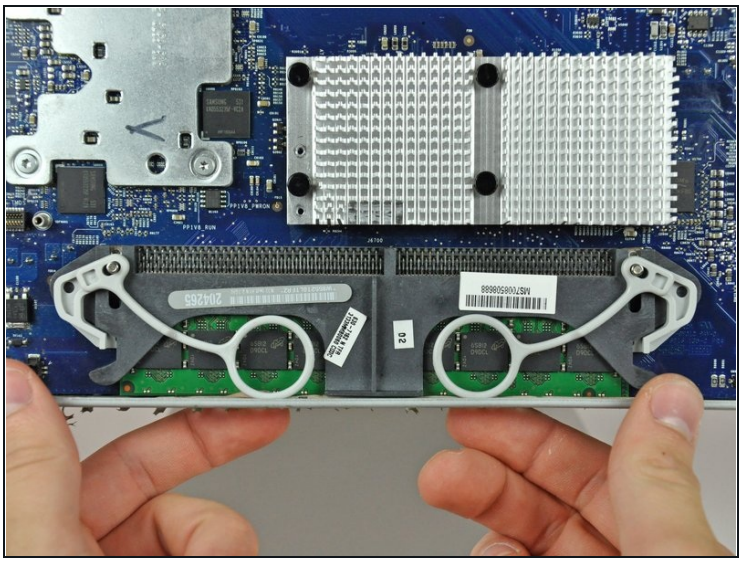
Step 40



- Remove the following seven screws securing the logic board to the rear case:
  - Three coarse-thread T10 Torx.
  - Three fine-thread T10 Torx.
  - One long coarse-thread T10 Torx.

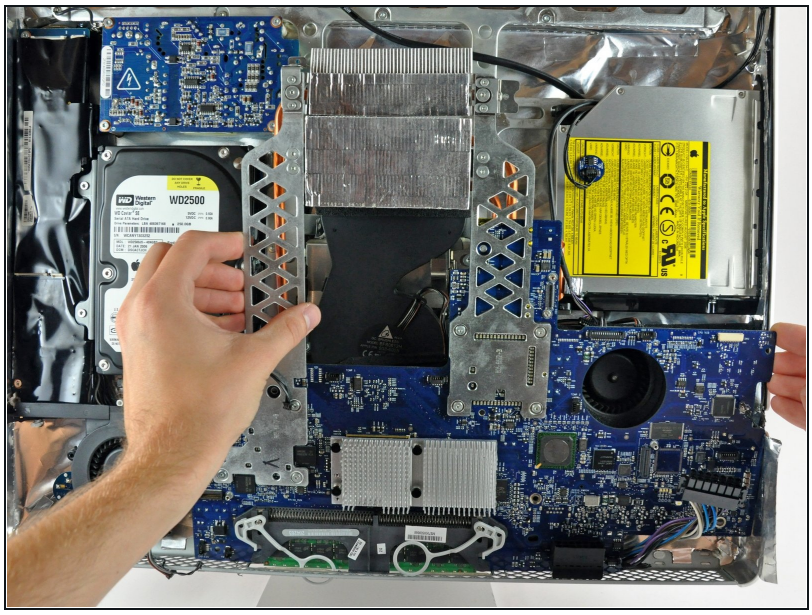
Step 41





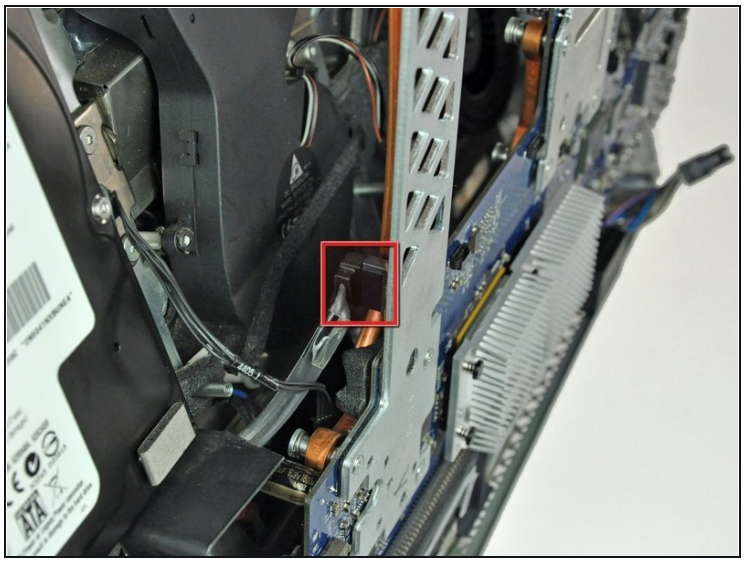
- Tuck the RAM arms into the iMac so they rest on the perforated metal grille along its lower edge.

Step 42



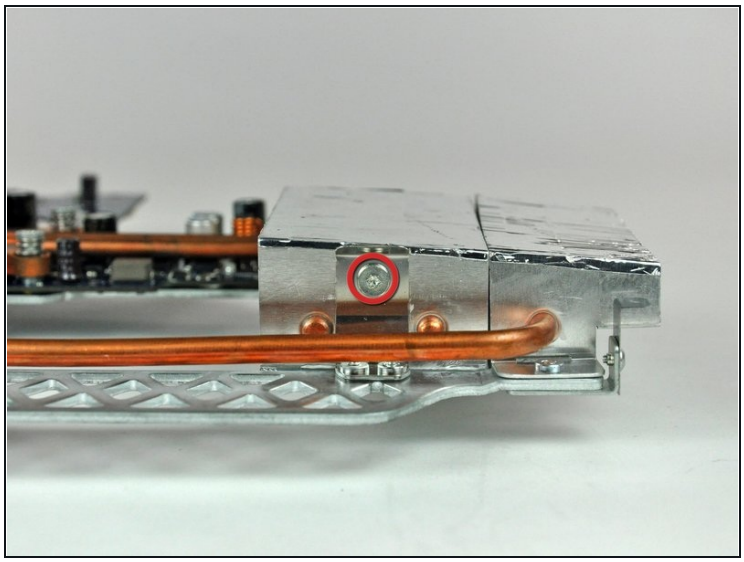
- Rotate the top of the logic board toward yourself slightly.
- Pull the right edge of the logic board toward yourself slightly to free the I/O ports from the rear case, being careful not to bend the board.
- Continue rotating the board toward yourself until you have enough room to reach the SATA connector, shown in the next step.

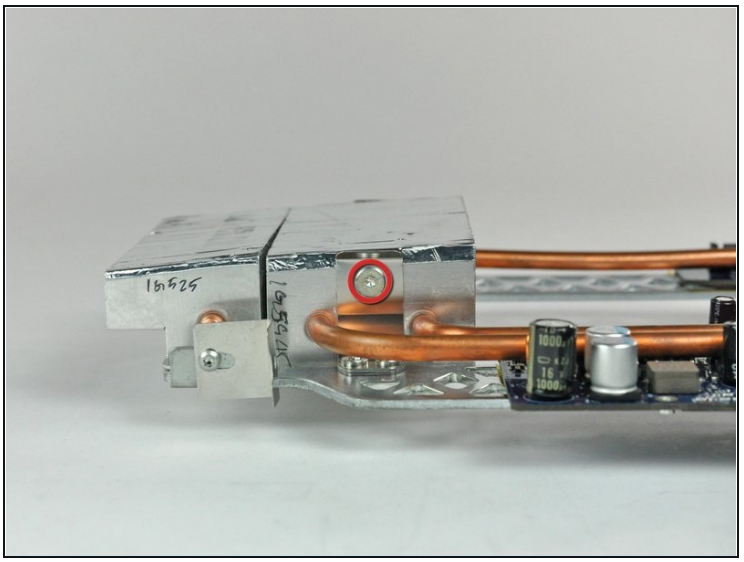
Step 43



- Continue rotating the board toward yourself until you have enough room to reach the SATA connector (shown in red).
- Insert the blunt end of a metal spudger between the SATA connector and its socket. Twist the shaft of the metal spudger to separate the connector from its socket.
- Disconnect the SATA cable from the logic board.
- Lift the logic board out of the rear case by its edges, minding any cables that may get caught.

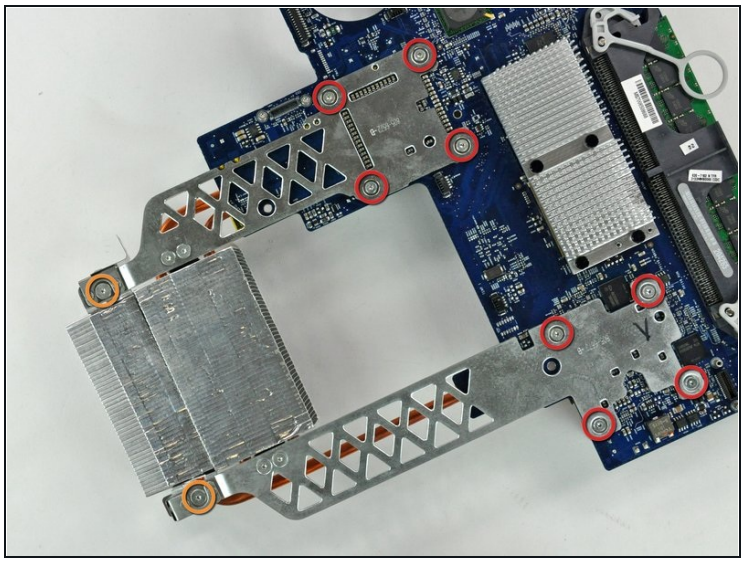
Step 44 — Heat Sinks

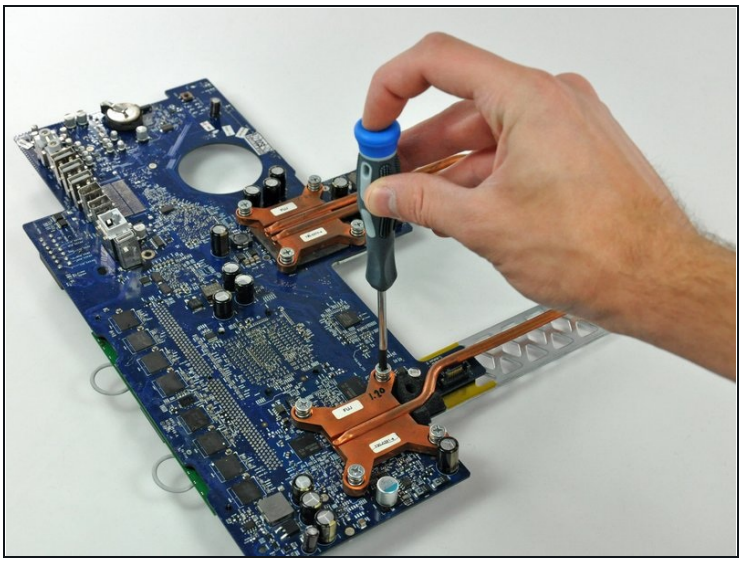




- Remove the 6.1 mm T8 Torx screw from both sides of the heat sink nearest the logic board (two screws total).

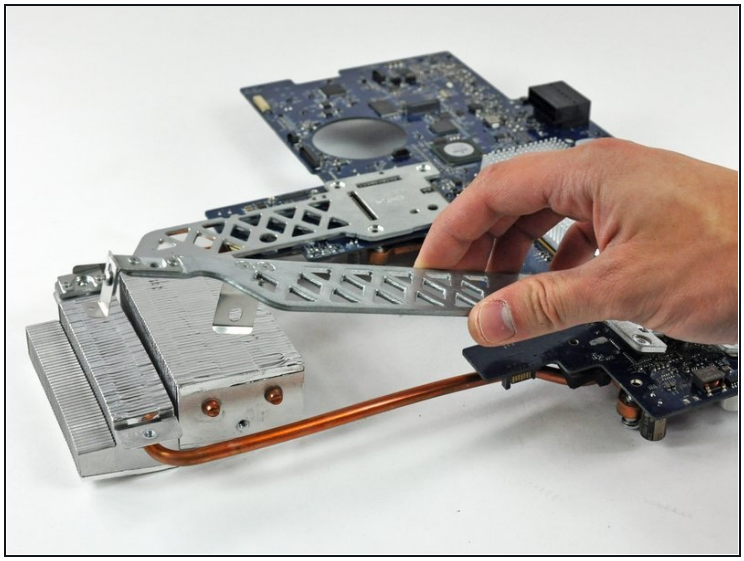
Step 45

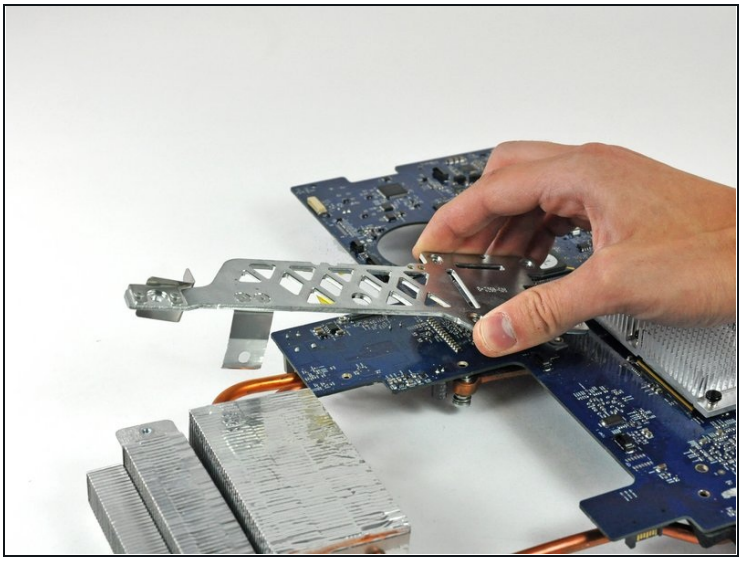




- Remove the following ten screws:
  - Eight 7.8 mm T8 Torx.
  - Two 6.1 mm T8 Torx.
- If the eight screws around the processors refuse to unscrew, use a Phillips screwdriver to hold the lug from the one side of the board while you remove the Torx screw from the other side.

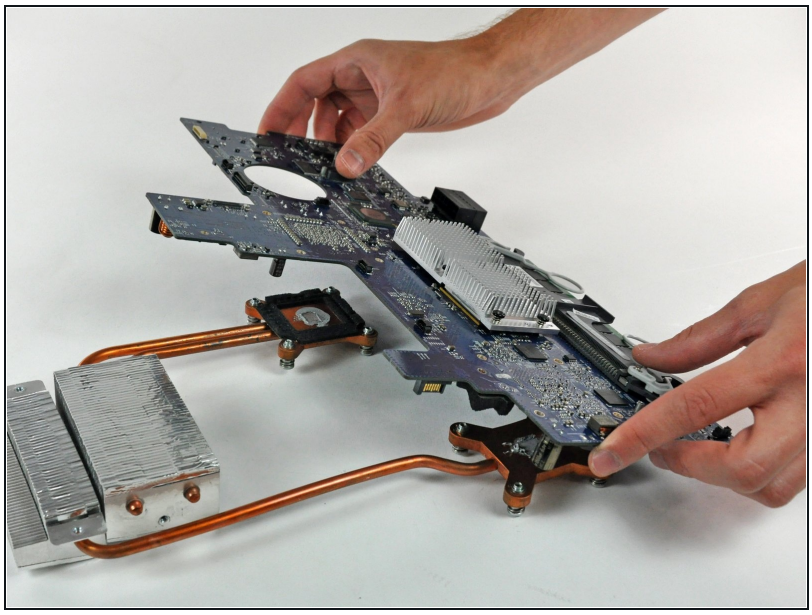
Step 46





- Carefully lift both metal heat sink brackets off the logic board.

Step 47



- Lift the logic board off the heat sinks.

If a heat sink seems to be stuck, carefully pry it away from the logic board to separate the solidified thermal paste.

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

During reinstallation it is helpful to install the heat sinks one at a time, starting with the one closest to the logic board.

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